



DIRECTOR

**DIRECTOR EC Series
Publishing System
Operator's Guide**



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Welcome to the Director EC System

Copyright Notice

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Other trademarks referred to are the property of their respective trademark or registered trademark holders.

CD-R/RW Recorder Warranty Policy

Individual CD-R/RW recorder manufacturers are responsible for the products they provide. As a convenience, MF DIGITAL will honor any service issue related to a defective recorder while under its respective manufacturer's warranty providing that the recorder has been purchased from MF DIGITAL either directly or indirectly. MF DIGITAL assumes no responsibility for products NOT purchased through MF DIGITAL.

Piracy

The copying of audio, video, or software without the permission of the copyright holder is illegal. MF DIGITAL accepts no responsibility for the copyright use or misuse of this equipment. It is the sole responsibility of the user to ensure that the legal rights of copyright in duplicating are respected.

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About MF Digital

Thank you for purchasing MF Digital's DIRECTOR EC publishing system. MF Digital manufactures a wide variety of software and audio duplication and production equipment, including manual and fully automatic CD and DVD duplicators and printers. We hope you will consider us for all of your production needs.

What To Expect From Your MF Digital DIRECTOR EC Publishing System

Your MF Digital DIRECTOR EC publishing system is professionally designed and manufactured to give you years of trouble free operation. To avoid accidental damage to your new DIRECTOR EC publishing system, please read and understand this manual thoroughly before operating the unit.

About This Manual

This manual is written for both novice and experienced users. Please read through this Operator's Guide from beginning to end before using the unit. Once having read the manual, follow along chapter by chapter. This will provide the necessary understanding of your new DIRECTOR EC publishing system.

Installing the DIRECTOR EC

Carefully remove the DIRECTOR EC publishing system from the shipping container. Inspect the contents and verify them against the packing slip. Report any errors in shipping as soon as possible.

What's In The Box

Your DIRECTOR EC is a complete publishing system containing all necessary components. The package includes:

- DIRECTOR EC publishing system
- Computer including: SVGA Monitor, Mouse, and keyboard
- Power cords
- Operator's Guide (on CD)
- Windows 2000 Pro license pack
- MF Digital Product & Warranty Registration card

Packing Materials

Please retain the original box and packaging in the event that the unit requires future servicing. This will help to reduce the possibility of damage occurring in transit.

The Best Place To Put The DIRECTOR EC

The best operating location for the DIRECTOR EC publishing system is in a climate controlled area, free of dirt, dust, humidity, excessive heat, and electronic or electromagnetic interference. Room temperature should be between 65 and 75 degrees Fahrenheit, or between 18 and 23 degrees Celsius. Place the DIRECTOR EC on a solid, steady work surface and allow sufficient room for all incidental work materials. Provide at least six inches of clearance on all sides of the unit for ventilation.

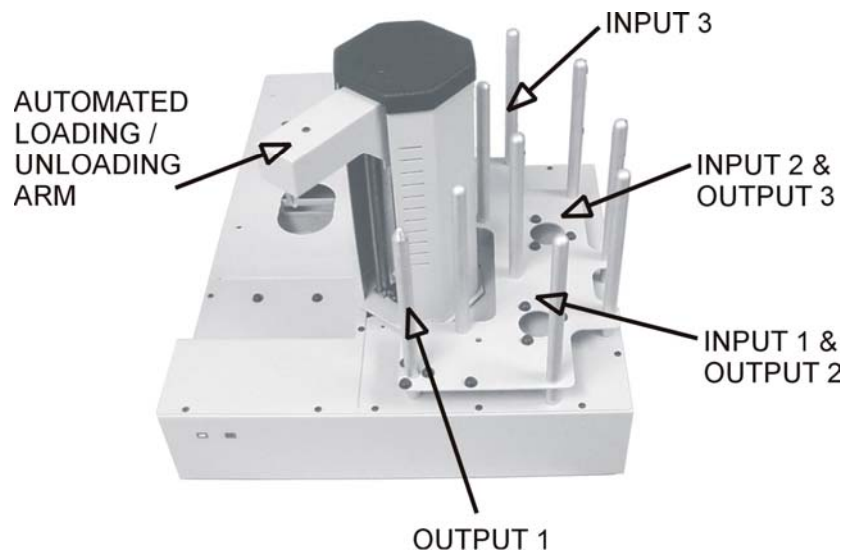
Safety Precautions

The system is shipped with a three-prong power connector and must be used with a properly grounded AC receptacle. **DO NOT** try to defeat the third “ground” prong. All computer peripherals must be properly grounded and the DIRECTOR EC is no exception. The use of a power conditioner such as an Uninterruptible Power Supply (UPS), or a surge protector is highly recommended. At the very least you should consider connecting the PC portion of the DIRECTOR EC to a UPS. The minimum required size is 500VA.

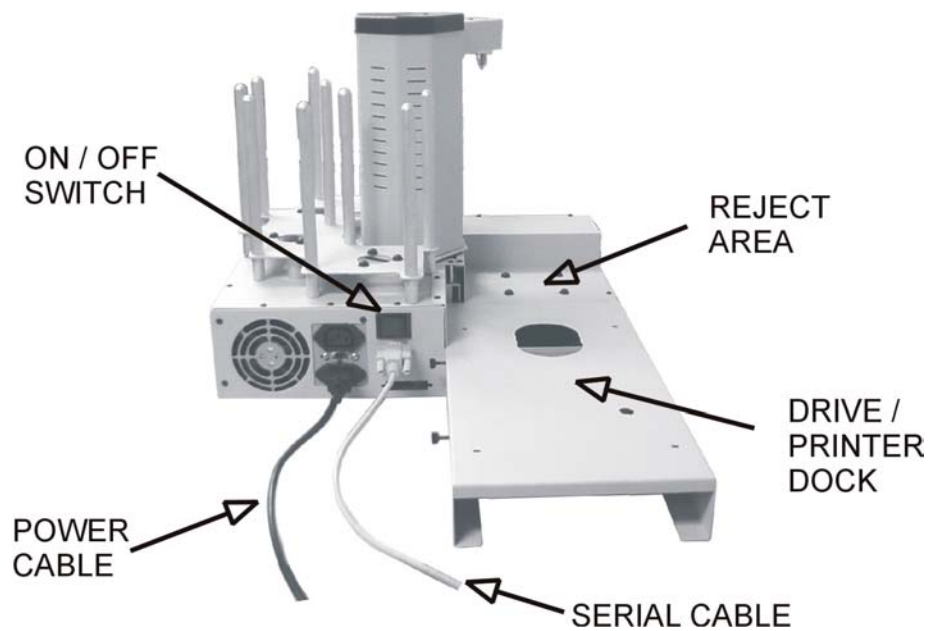
Repairs or alterations should only be attempted by authorized factory trained technicians. MF Digital reserves the right to void the warranty if unauthorized service is performed.

Location Of DIRECTOR EC Components

Front View

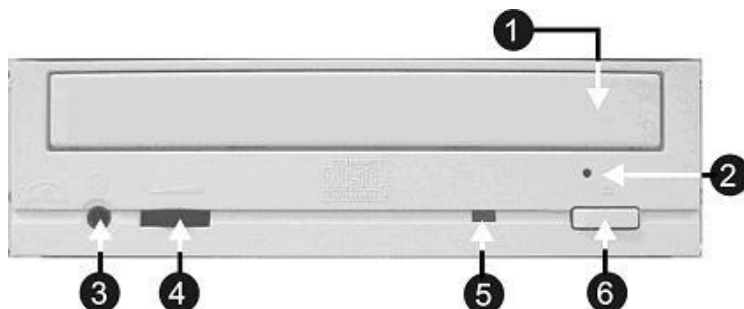


Rear View



Location Of CD-R/RW and DVD \pm R/ \pm RW Recorder Parts And Controls

ProDRIVE 52x



Legend

1. **Disc tray** - Discs are loaded and removed from this tray. Pressing the eject button will open the tray when the power is switched on to the Director EC.
2. **Emergency eject pinhole** - In the event that the disc tray will not open by pressing the eject button, insert the tip of a large paper clip into this hole and push.
3. **Earphone jack**
4. **Volume Control**
5. **Read and write status LEDs** - These indicators light up when the recorder is reading or writing.
6. **Eject button** - This button is used to open or close the disc tray.

Pioneer DVD-R \pm / \pm RW



Legend

- 1) **Disc Tray** - Discs are loaded and removed from this tray. Pressing the eject button will open the tray when the power to the Director EC is switched on.
- 2) **Headphone Jack** - Connect headphones here.
- 3) **Volume Control Knob** - This controls the volume level of the headphones.
- 4) **Disc Indicator** - Light indicates presence of disc in drive.
- 5) **Ventilation Hole** - Do not block.
- 6) **Ventilation Hole** - Do not block.
- 7) **Eject Button** - This button is used to manually open the disc tray.
- 8) **Emergency Eject Pinhole** - In the event that the disc tray will not open by pressing the eject button, insert the tip of a large paper clip into this hole.

Removing Packing Restraints

The DIRECTOR EC ships with a picker arm restraint to reduce the possibility of damage in transit. This restraint must be removed before operation or power-on. Remove the foam block above the transfer arm. Save the foam block, as you will need to return it to its place if you need to transport the unit in the future.

Input And Output Spindles

The input bin and the output spindle and bins serve as the containers to store up to 200 blank and recorded discs per bin (up to 600 total depending on printer option).

Installing The Printer

Before operating the DIRECTOR EC, the printer must be properly mounted and aligned. In addition, please familiarize yourself with the documentation included with the Spectrum2 thermal CD printer.

Preparing the Prism Plus Printer



(fig. 0) Cabling arrangement for Prism Plus Printer

1. With a Torx head screwdriver, remove the rubber feet from the bottom of the printer (fig. 1).
2. Using the flat head screws provided, attach the printer plate to the bottom of the printer as seen in (fig. 2).



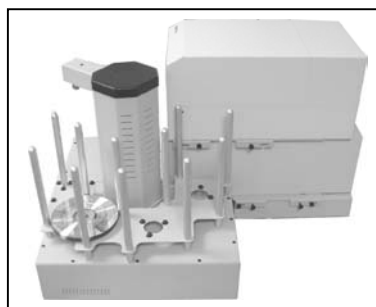
(fig. 1)



(fig. 2)

NOTE: Fig 3 – Fig 5 shows placement of Spectrum 2 printer. Placement for Prism Plus is similar.

3. Place the printer / plate onto the drive bay (fig. 3)
4. Use the dotted line at the rear of the drive bay to guide the positioning of the printer on the drive tower (fig. 4)
5. After placing the printer on the drive tower, use the "Printer Alignment" function to align the printer. Please refer to p. 30 for details.
6. Once you are satisfied with the printer alignment, tighten the thumb-screws located on both sides of the printer (fig. 5).



(fig. 3)



(fig. 4)



(fig. 5)

Installing The Monitor, Keyboard And Mouse

Before operating the DIRECTOR EC, the monitor, keyboard and mouse must be attached.

Connecting The Monitor

- Place the monitor on either side of the DIRECTOR EC unit.
- Make sure the monitor power switch is set to the off position.
- Connect one end of the power cord to the VAC Out on the monitor and the other to the wall power outlet.
- Connect the High Density DB15 male connector of the video cable to the High Density DB15 female Video In port on the back of the host computer.

Connecting The Mouse And Keyboard

- Connect the PS/2 male connector of the mouse cord to the PS/2 female Mouse In port on the back of the DIRECTOR EC.
- Connect the PS/2 male connector of the keyboard cord to the PS/2 female Keyboard In port on the back of the DIRECTOR EC.

Installing The Network Cable

In addition to operating as a standalone duplicator the DIRECTOR EC can be connected to a network to receive files for pre-mastering or even be remotely controlled by use of the DIRECTOR EC's advanced Application Program Interface (SmartAPI). The unit comes equipped from the factory with a 3COM 10/100BaseT Ethernet card for network attachment.

Note:

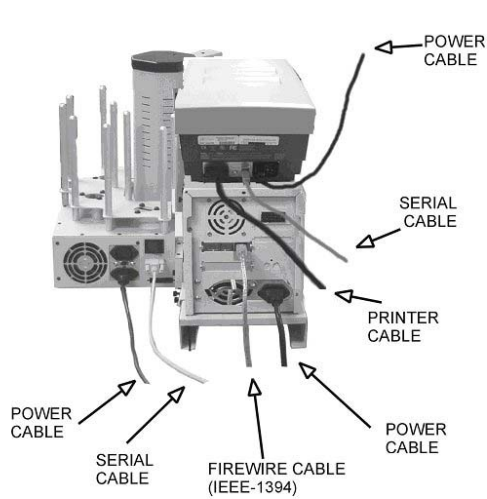
While networks are commonplace, their connection and interconnection require specific expertise far beyond the scope of this manual. For our purposes here, we will assume you either have expertise with networking computers, or had your unit professionally installed by MF Digital.

Connecting The Network Cable

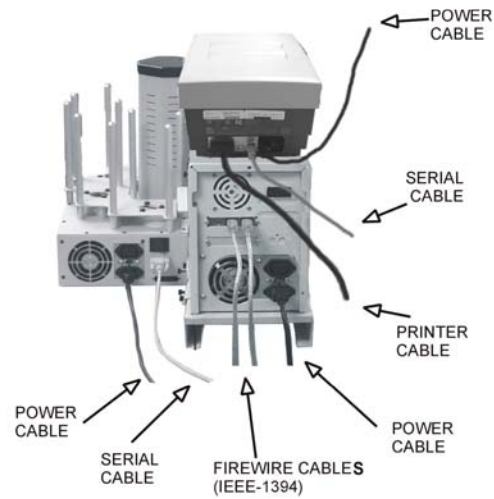
- Connect a suitable patch cord to the RJ45 network port on the back of the DIRECTOR EC unit. A Category 3 or better cable should be used for 10Base-T and Category 5 for 100Base-T network connection.

Installing Firewire Cables

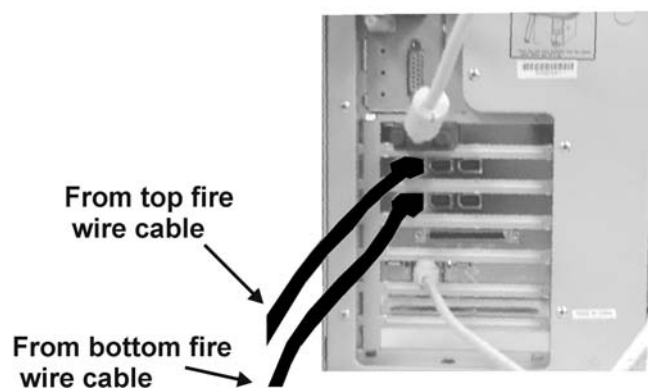
The following illustrations show firewire installation on the Director EC. Please connect the firewire cables as illustrated below.



Director EC-2



Director EC-4



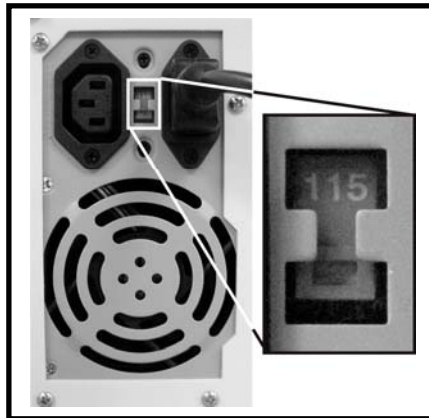
Firewire Connection on back of PC

Starting the DIRECTOR EC For The First Time

Before CD creation or duplication can begin it is necessary to review a few details.

Power Connection And Settings

- Make sure the DIRECTOR EC power switch is set to the off position. Also, set the PC switch to off or "0".
- Verify that the voltage selector switch on the back of the unit is set correctly. The DIRECTOR EC supports both 115 VAC and 230 VAC at 50 ~ 60 Hz. Please confirm that the correct voltage (115 VAC for North America) has been selected.



- Plug one end of the supplied power cord into the receptacle at the rear of the unit and the other end into the wall or UPS power outlet.



CAUTION

Always use properly grounded receptacles, or severe damage to your system may result. The use of a surge protector or Uninterruptible Power Supply (UPS) is highly recommended.

Note:

The DIRECTOR EC use Microsoft's Windows 2000 Professional for their operating system. To get the most out of the DIRECTOR EC it is recommended that users supplement this manual with a Windows 2000 Professional guide.

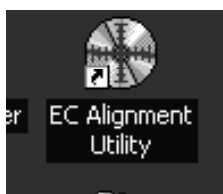
Starting Up

- Flip the DIRECTOR EC power switch to the “on” position.
- Flip the host computer's power switch to the “on” position.
- Switch on the power to the printer.
- Wait a minute or two while the system starts up. A series of diagnostic information will be displayed and once complete the unit will display the *Begin Logon* dialog box.
- Enter “MF Digital” in lowercase letters for the password. Please note that the password is case sensitive.
- Press the **ENTER** key. The screen will now display the DIRECTOR EC desktop screen.

Aligning The Drive Tower and Printer

The printer must now be manually positioned relative to the DIRECTOR EC's disc picking mechanism. Once the correct position has been determined the drive tower and printer retaining guides are screwed down tight to hold the drive tower and printer in place.

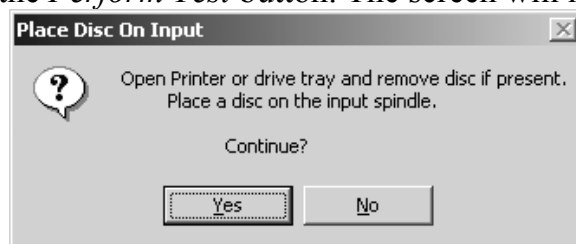
- From the DIRECTOR EC's desktop screen, double click the "EC Alignment Utility" icon.



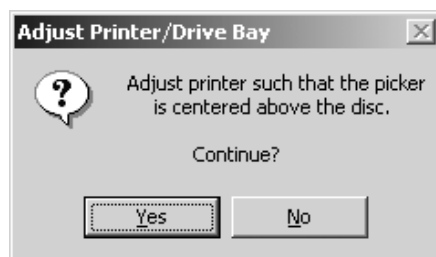
- The screen will now display:



- Click the *Perform Test* button. The screen will now display:



- Manually open drive tray
- Place a blank disc on the input spindle.
- Click the *Yes* button.
- The disc will be loaded from the input spindle and over the open drive tray, so that you may properly align the drive tower



- Click the *Yes* button.
- The disc will be loaded onto the drive tray. Observe the disc's position on the tray. The CD fits into the inset on the drive tray.
- The screen will now display:



- Click the *OK* button. The disc will be unloaded onto the output spindle. If the drive tower alignment is correct, tighten the thumb screws for the drive tower. If the alignment is not correct, adjust the position of the drive tower as needed and repeat the procedure. When aligning the printer is completed click the *Exit* button. The EC Alignment Utility will close.

- After aligning the drive tower, repeat the same procedure to align the printer.

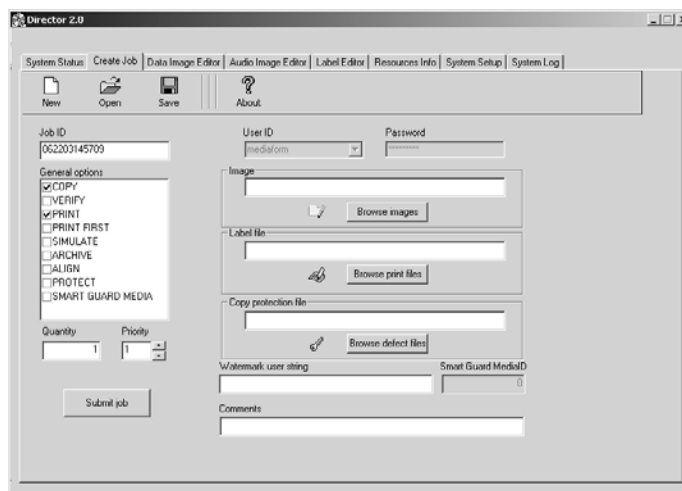
Application Startup

The DIRECTOR EC is a state-of-the-art CD publishing system and duplicator. It is designed to create, duplicate and verify most standard compact disc formats. This startup section will guide you through starting and configuring the DIRECTOR EC application.

Starting the *DIRECTOR EC* Application

To start the DIRECTOR EC application the steps are as follows:

- From the DIRECTOR EC desktop, double click the “DIRECTOR EC” icon on the Windows desktop. The DIRECTOR EC application screen will now be displayed:



- Place as many blank discs as required onto the input spindle.

DIRECTOR EC Application Layout

The DIRECTOR EC application is organized into a sequence of eight pages accessible by tabs at the top of the screen (*System Status*, *Create Job*, *Data Image Editor*, *Audio Image Editor*, *Label Editor*, *Resources Info*, *System Setup*, *System Log*). By completing information on these cards you control the actions of the DIRECTOR EC to create, duplicate and verify CDs as well as print disc labels.

Tabs:

System Status	Displays the status of jobs after they have been submitted for production.
Create Job	Brings together the data or audio contents and label components of a CD so it can be produced.
Data Image Editor	Specifies the contents of a data CD to be recorded.
Audio Image Editor	Specifies the contents of an audio CD to be recorded.
Label Editor	Creates labels to be printed on the surface of CDs.
Resources Info	Displays the hardware elements connected to the DIRECTOR EC.
System Setup	Defines operating settings and user privileges.
System Log	Displays the database of information maintained on all jobs.

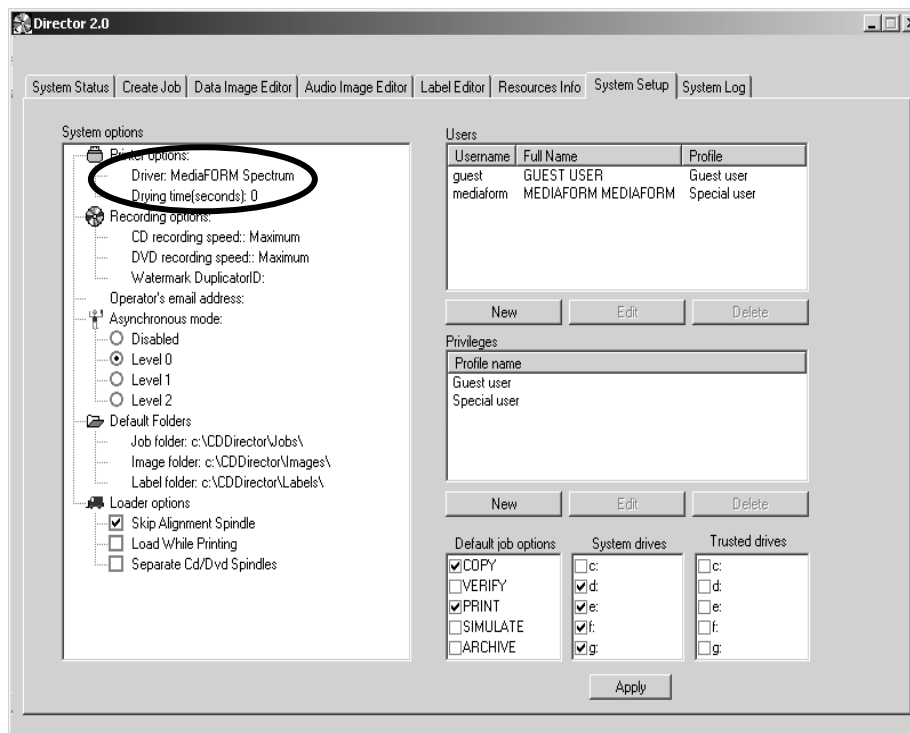
DIRECTOR EC Application Configuration

Before creating or duplicating a CD the DIRECTOR EC application must first be configured. The ***System Setup*** tab is used to establish a number of important settings including basic operation parameters as well as the authorized users and privileges they have using the DIRECTOR EC.

Note: Apply button must be clicked in order for any changes to take effect. Except for modification of users and privileges.

To begin or modify an existing setup of the DIRECTOR EC:

- Click the ***System Setup*** tab. The screen will now display:



The **System Setup** tab is divided into a number of information fields that must be completed.

Printer Driver (Required)

The *Printer Driver* pull-down is used to indicate to the DIRECTOR EC the type of printer that is installed.

- Click the *Printer Driver* pull down and select your printer Ex: “MF Digital Spectrum”.

Operator's Email Address (Optional)

The OPERATOR'S EMAIL ADDRESS field is a user defined email address to which a network attached DIRECTOR EC will send a message when the unit requires attention (such as an empty input spindle, etc.). The email feature requires the presence of a POP3 or IMAP server on the network and that an email client account be created for use by the DIRECTOR EC.

Note:

DIRECTOR EC sends email via MAPI hence you must first setup a MAPI email client on the DIRECTOR EC. Make sure you set this client to be used from MAPI based applications.

- Click the *Operator's E-mail Address* field and enter an email address. Leave the field blank if the DIRECTOR EC is not attached to a network or if you do not want to receive unit attention messages.

Recording Speed (Required)

The *Recording Speed* pull-down allows you to set the recording speed as determined by the capabilities of the recorders installed in the DIRECTOR EC.

- Click the *Recording Speed* pull down and select the desired recording speed "maximum speed", or "4x, 8x, 12x, 16x, 20x, 24x, 32x, or 48x speed".
- Click on "Apply" to activate the changes.

Asynchronous Mode (Required)

The *Asynchronous Mode* pull-down is used to instruct the DIRECTOR EC how to process jobs. This affects both how jobs are handled and how the drives operate. Jobs and drives can run either synchronously or asynchronously. In the table below you will find each mode detailed. Let's define the basic modes first:

Jobs=Synchronous / Asynchronous

When jobs are Synchronous, they are completed in the order in which they were submitted. Take for example two jobs submitted for one copy each. The first job is of a 650MB master while the second job is only 10MB. While the second job submitted will be completed prior to the first job, it will not be outputted to the accept spindle until the second job has been completed. When jobs are Asynchronous they will be outputted to the accept spindle as they are completed.

Drives=Synchronous / Asynchronous

Drives can also run either synchronously or asynchronously. In synchronous mode, all the drives in use for a given job, run in tandem or parallel to one another. In asynchronous mode, all the drives in use for a given job, operate independently of each other. For example if you submit a job for three copies and the drives are operating synchronously, the copying process will not begin until all drives become ready. On the other hand, if the same job were submitted with the drives operating asynchronously, each drive would begin to write as soon as it becomes ready, independently of any other drives which may

also be in use for this particular job. Asynchronous mode is more demanding of system resources.

The modes of operation are:

<i>Mode</i>	<i>Description</i>
<i>Disabled</i>	<p><i>Jobs=Synchronous (FIFO), Drives=Synchronous</i></p> <p>When the setting is “disabled”, jobs are processed on a first in/first out (FIFO) basis such that they will be kept together when placed on the output spindle. For example, let us say two jobs of one piece each are submitted. Job 1 is a 650 MB disc and Job 2 is a 10 MB disc. Even though Job 2 was submitted last, it will completed before Job 1 but it will NOT be outputted to the accept spindle until Job 1 is done.</p>
<i>Level 0</i>	<p><i>Jobs=Asynchronous, Drives=Synchronous (Default)</i></p> <p>When the setting is “level 0” jobs are still started on a first in / first out basis, but completed jobs will be outputted when they are done and therefore discs will be mixed together on the output spindle. For example, let us say two jobs of two pieces each are submitted. Job 1 is a 650 MB disc and Job 2 is a 10 MB disc. Even though Job 2 was submitted last, it will completed before Job 1 but unlike the DIASBLED mode, it will not be held but rather immediately outputted to the accept spindle when it is done. In processing the respective jobs, the two drives in use for each job will function in tandem such that they will not begin to write until both drives have become ready.</p>
<i>Level 1*</i>	<p><i>Jobs=Synchronous (FIFO), Drives=Asynchronous</i></p> <p>When the setting is “Level 1”, jobs are processed on a first in/first out (FIFO) basis such that they will be kept together when placed on the output spindle. For example, let us say two jobs of two pieces each are submitted. Job 1 is a 650 MB disc and Job 2 is a 10 MB disc. Even though Job 2 was submitted last, it will completed before Job 1 but it will NOT be outputted to the accept spindle until Job 1 is done. In processing the respective jobs, the two drives in use for each job will function independently of one another and begin to write as soon as they become ready.</p>
<i>Level 2*</i>	<p><i>Jobs=Asynchronous (FIFO), Drives=Asynchronous</i></p> <p>When the setting is “level 2” jobs are still started on a first in / first out basis but completed jobs will be outputted when they are done. For example, let us say two jobs of two pieces each are submitted. Job 1 is a 650 MB disc and Job 2 is a 10 MB disc. Even though Job 2 was submitted last, it will completed before Job 1 but unlike the DIASBLED mode, it will not be held but rather immediately outputted to the accept spindle when it is done. In processing the respective jobs, the two drives in use for each job will function independently of one another and begin to write as soon as they become ready. In this mode, disc placement on output spindle will be scattered.</p>

- Click the ASYNCHRONOUS MODE pull down and select the desired “disabled” or “level O” setting (*level 1 and level 2 not used*).

Default Job File Folder (Required)

The DEFAULT JOB FILE FOLDER field is used to specify the default location where job files (*.JOB) will be saved. The factory setting (C:\CDDIRECTOR\Jobs\) should be sufficient for most uses. To change the default setting:

- Click the *Browse* button below the DEFAULT JOB FILE FOLDER field.
- Select the volume and Director EC where you wish to save job files.
- Click the *OK* button.

Default Image File Folder (Required)

The DEFAULT IMAGE FILE FOLDER field is used to specify the default location where disc image script (*.ISC) will be saved. The factory setting (C:\CDDIRECTOR\Images\) should be sufficient for most uses. To change the default setting:

- Click the *Browse* button below the DEFAULT IMAGE FILE FOLDER field.
- Select the volume and Director EC where you wish to save disc image files.
- Click the *OK* button.

Default Label File Folder (Required)

The DEFAULT LABEL FILE FOLDER field is used to specify the default location where disc label files (*.LBL) will be saved. The factory setting (C:\CDDIRECTOR\Labels\) should be sufficient for most uses. To change the default setting:

- Click the *Browse* button below the DEFAULT LABEL FILE FOLDER field.
- Select the volume and Director EC where you wish to save disc label files.
- Click the *OK* button.

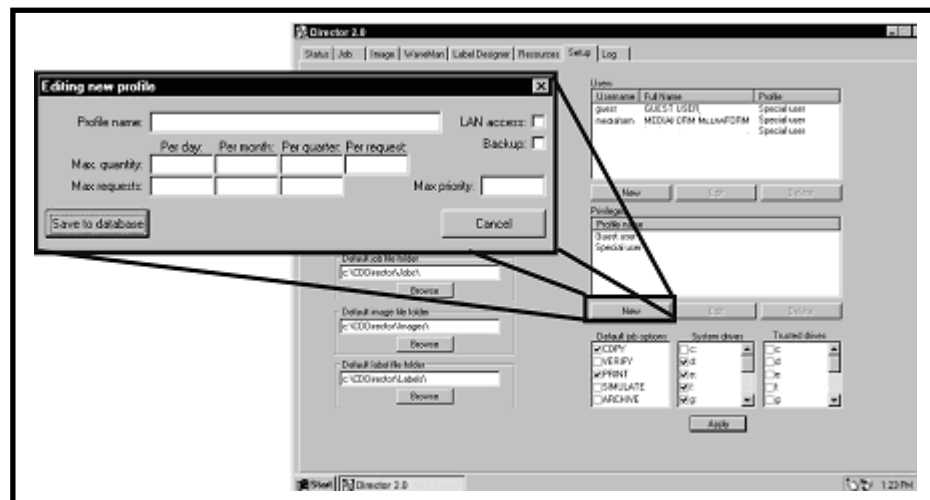
Creating New Privileges Profile

Control access to the DIRECTOR EC by restricting use to only authorized users. The main intent of this is for jobs submitted remotely through the included **Java Client**, or through other client side applications. New users must first be entered into the DIRECTOR EC's database and their privileges or permissions assigned.

The first step in entering new users into the database is to create profiles, which define types or classes of users and their work privileges on the DIRECTOR EC. For example, a "Team Leader" profile might be established for users who need to produce an unlimited number of discs and a "Team Member" profile created for other users in order to restrict the number of discs they can produce in a given period of time.

To create a new privilege profile:

- Click the *New* button below the PRIVILEGES window.
- Complete these required fields:



Editing Privileges

Profile name	Required. Enter the profile name.
Max quantity per day	Required. Enter the maximum number of discs this type of user is allowed to record/print per day.
Max quantity per month	Required. Enter the maximum number of discs this type of user is allowed to record/print per month.
Max quantity per quarter	Required. Enter the maximum number of discs this type of user is allowed to record/print per quarter.
Max quantity per request	Required. Enter the maximum number of discs this type of user is allowed to record/print per job.
Max requests per day	Required. Enter the maximum number of jobs this type of user is allowed to submit per day.
Max requests per month	Required. Enter the maximum number of jobs this type of user is allowed to submit per month.
Max requests per quarter	Required. Enter the maximum number of jobs this type of user is allowed to submit per quarter.
Max priority	Required. Enter the maximum priority (1 lowest - 99 highest) this type of user is allowed to assign a job. Jobs are queued based on order of submission and priority. Jobs of higher priority will be queued before jobs of lower priority. If the priority level is the same, the job will be processed in order of submission.

- When finished entering the information, click the *Save To Database* button.

Editing Existing Privileges Profile

To edit an existing privilege profile:

- Click the privilege profile you wish to edit and click the *Edit* button below the PRIVILEGES window. The privileges information boxes will be displayed.
 - Make any changes as needed then click the *Save To Database* button.
-

Deleting Existing Privileges Profile

To delete an existing privileges profile:

- Click the privilege profile you wish to delete and click the *Delete* button below the PRIVILEGES window.
- Click the *Yes* button to confirm.

Note:

You may NOT delete a Profile while users are assigned to it. You must first either delete or assign the users a new profile, then the profile may be deleted.

Creating New Users

After creating suitable privileges profiles the next step is to enter new users and their personal information into the DIRECTOR EC's database.

To create a new user:

- Click the *New* button below the USERS window.
- Complete the user information boxes:

Creating New Users

Username	Required. Enter a name for the user. (15 characters maximum, A to Z, 0 to 9)
First Name	Required. Enter the user's first name. (16 characters maximum, A to Z, 0 to 9)
Last Name	Required. Enter the user's last name. (31 characters maximum, A to Z, 0 to 9)
Password	Required. Enter the user's password. (15 characters maximum, A to Z, 0 to 9)
Confirm Password	Required. Enter the user's password a second time.
Privileges	Required. Select a defined privileges profile.
Max Quantity	Determined by privileges profile.
Max Requests	Determined by privileges profile.
Max Priority	Determined by privileges profile.
Company	Optional. Enter the user's company name. (63 characters maximum, A to Z, 0 to 9)
Department	Optional. Enter the user's department name.

	(31 characters maximum, A to Z, 0 to 9)
Street Address 1	Optional. Enter the user's street address. (63 characters maximum, A to Z, 0 to 9)
Street Address 2	Optional. Enter the user's street address. (63 characters maximum, A to Z, 0 to 9)
City	Optional. Enter the user's city. (31 characters maximum, A to Z, 0 to 9)
State/Province	Optional. Enter the user's state or province. (15 characters maximum, A to Z, 0 to 9)
Zip/Postal Code	Optional. Enter the user's Zip or postal code. (15 characters maximum, A to Z, 0 to 9)
Country	Optional. Enter the user's country. (15 characters maximum, A to Z, 0 to 9)
Phone	Optional. Enter the user's telephone number.
Fax	Optional. Enter the user's fax number.
Email	Optional. Enter the user's email address.
Date Entered	Automatic. The DIRECTOR EC automatically registers the date and time the user's information is entered.

- When finished entering the information click the *Save To Database* button.

Editing Existing Users

To edit an existing user:

- Click the username you wish to edit and click the *Edit* button below the USERS window and the user information boxes will be displayed.
- Make any changes as needed then click the *Save To Database* button.

Deleting Existing Users

To delete an existing user:

- Click the username you wish to delete and click the *Delete* button below the USERS window.
- Click the *Yes* button to confirm.

Default Job Options

The DEFAULT JOB OPTIONS window allows you to specify which production options will be enabled on the ***Job*** tab when the DIRECTOR EC application is started. Setting these defaults can save time if the type of jobs you produce fall into a regular pattern.

To change the job option defaults:

- Select or de-select the check box next to the appropriate option:

Default Job Options:

Copy	When checked the Copy option on the <i>Job</i> tab will be enabled by default.
Verify	When checked the Verify option on the <i>Job</i> tab will be enabled by default.
Print	When checked the Print option on the <i>Job</i> tab will be enabled by default.
Simulate	When checked the Simulate option on the <i>Job</i> tab will be enabled by default.
Archive	When checked the Archive option on the <i>Job</i> tab will be enabled by default.

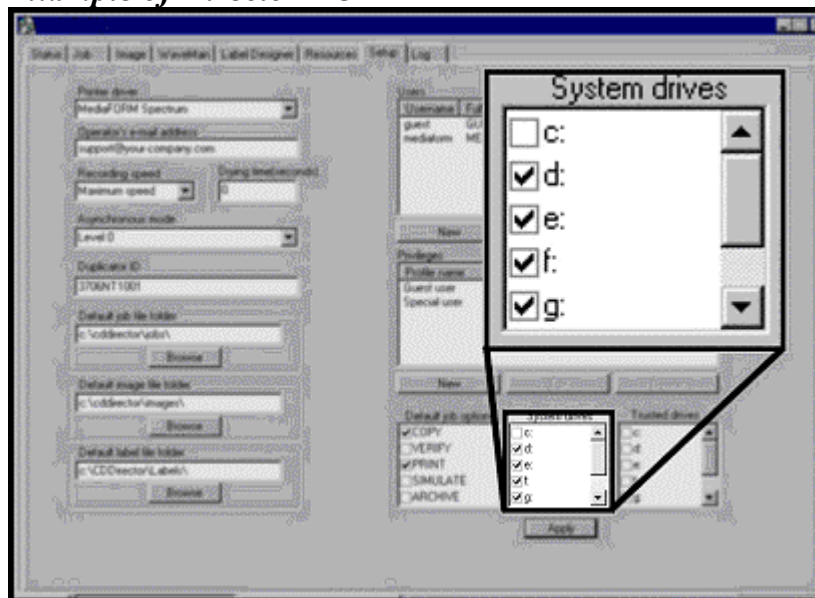
System Drives

The SYSTEM DRIVES window allows you to specify which hard disk drives the DIRECTOR EC uses exclusively. The factory settings should be sufficient for most uses.

Director EC-4: Be sure that: **D:**, **E:**, **F:**, and **G:** are selected. **DO NOT SELECT C:**.

Director Office Publisher (EC-2): Be sure that: **D:**, and **E:** are selected. **DO NOT SELECT C:**.

Example of Director EC-4



To change the SYSTEM DRIVES:

- Select or de-select the check box next to the appropriate drive.
- Click “Apply” after making the changes.

Trusted Drives

The TRUSTED DRIVES window allows you to specify which hard disk drives are capable of sustaining the data transfer rate necessary for recording CDs. The C: drive (which houses the DIRECTOR EC's operating system and application) should never be used as a recording source. The factory settings should be sufficient for most uses.

To change the TRUSTED DRIVES:

- Select or de-select the check box next to the appropriate drive.

Note:

Unless you have added a raid solution, or other additional fast storage, you should never change the default settings. EIDE drives should not be used for this purpose. Please consult your MF Digital reseller if you wish to add additional storage.

Controlling the DIRECTOR EC From Custom Applications

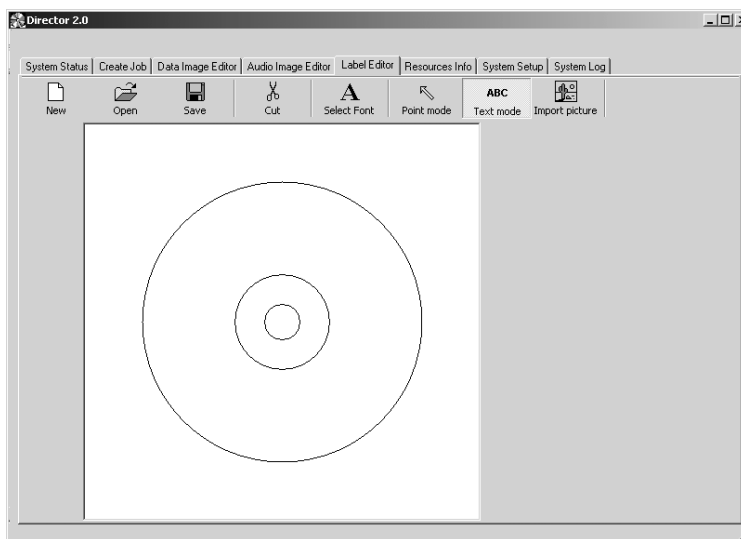
In addition to operating the DIRECTOR EC from its console, you have the option to remotely control the system from anywhere on the network using your own custom applications or scripts. This is accomplished using the DIRECTOR EC's Application Program Interface (SmartAPI) after initial configuration using the *System Setup* tab. For additional information see the DIRECTOR EC's SmartAPI Programmer's Guide.

Creating Disc Labels

The first step in creating a CD is to create a label that will be printed on the surface of the disc. The DIRECTOR EC's built-in label design software provides a quick and easy way to create simple disc labels that contain text and graphics. More sophisticated labels can be created by using the provided software included with the your printer.

To use the DIRECTOR EC's built-in label design software:

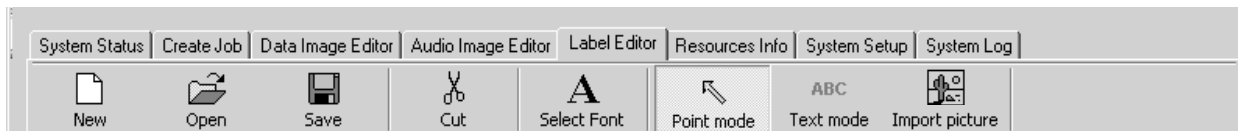
- Click the **Label Editor** tab. The screen will now display:



The **Label Editor's** main editing window consists of two concentric circles that graphically represent the surface appearance of a CD.

Label Editor Menu Bar

Horizontally along the top of the Label Editor window is the menu bar, as depicted below:



The menu bar contains eight buttons: *New*, *Open*, *Save*, *Cut*, *Select Font*, *Point Mode*, *Text Mode* and *Import Picture*.

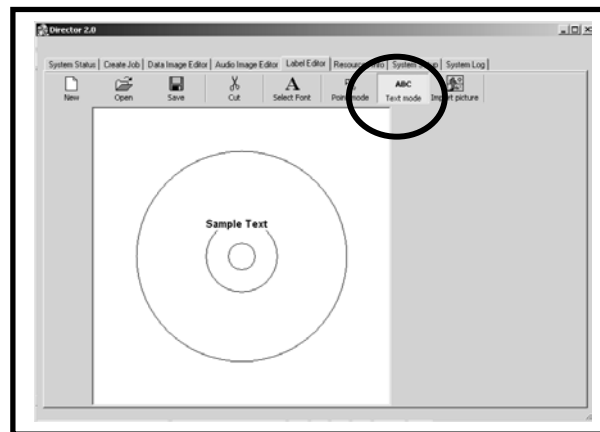
Label Menu Buttons:

New	Creates a new disc label.
Open	Opens an existing disc label file (*.LBL).
Save	Saves the current disc label.
Cut	Cuts the selected item
Select Font	Used to select the font, style, size and color before creating text on the disc label.
Point Mode	Used to select a piece of text, date field or graphic image so it can be moved, modified or deleted.
Text Mode	Used to create text on the disc label.
Import Picture	Used to place a graphic image file created using other software on the disc label.

Creating Text

Using the *Text Mode* tool, you can create horizontal text anywhere on your disc label. In addition, once the text has been entered it can be repositioned and its font and other attributes changed. To create text:

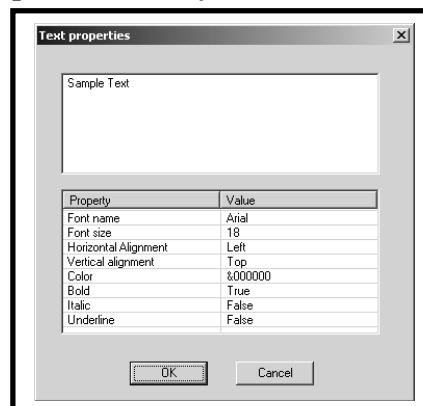
- Click the *Text Mode* button on the toolbar.
- Click where you want the type to begin.
- Enter the text you want.



Changing Text And Text Attributes

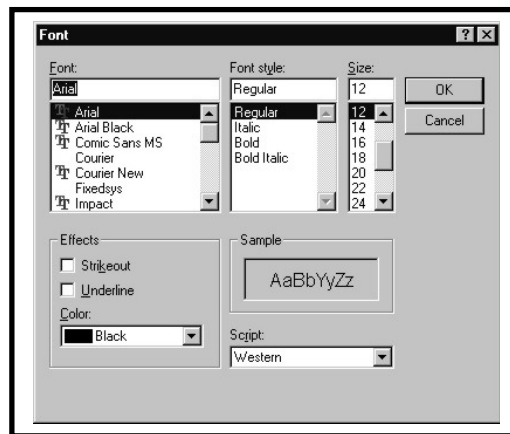
To change the attributes of a piece of text once it has been entered:

- Click the *Point Mode* button on the toolbar.
- Double click the piece of text you wish to change. The screen will now display:



- To change the text that you previously typed in, edit the contents of the text box.

- To change the font, style, size or color, click the *Select Font* button. The screen will now display:

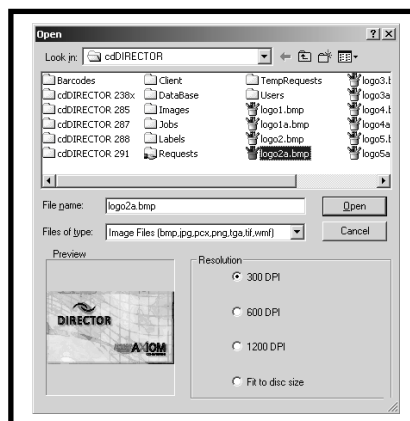


- After making the changes click the *OK* button.
- Click the *OK* button.

Importing Graphics

Using the *Import Picture* tool, you can place graphics created using other software anywhere on your disc label. To import a graphics file:

- Click the *Import Picture* button on the toolbar. The screen will now display:

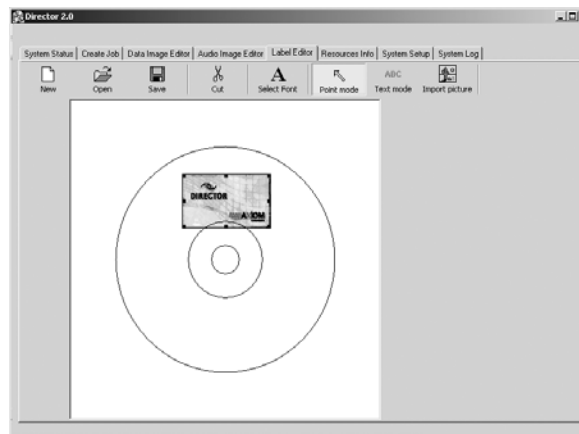


- Select the graphics file you wish to import (supported formats include BMP, JPG, PCX, PNG, TGA, TIF and WMF).
- Click the *Open* button.

Resizing Graphics

To proportionally resize a graphic image after it has been imported:

- Click the *Point* button on the toolbar.
- Click the graphic image you wish to resize. A bounding box will appear around the image with eight solid squares (handles).
- Click and drag the appropriate handle until the image is the correct size and release the mouse button.



Repositioning Text, Graphics and Dates

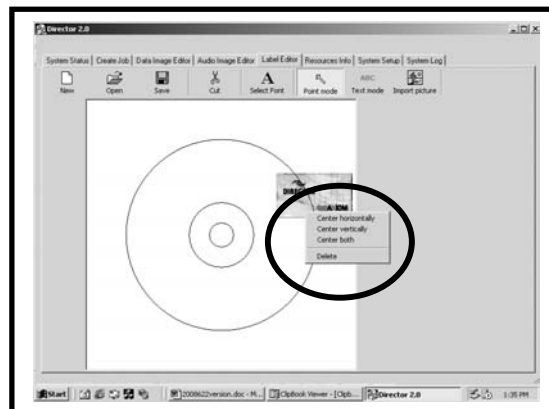
To reposition a piece of text, a graphic image or a date field after it has been created or imported:

- Click the *Point* button on the toolbar.
- Click and hold on the selected text or graphic image you wish to move.
- Drag the text or graphic image to the desired location and release the mouse button.

Centering Text and Graphics

To center text or graphic images after they have been created or imported:

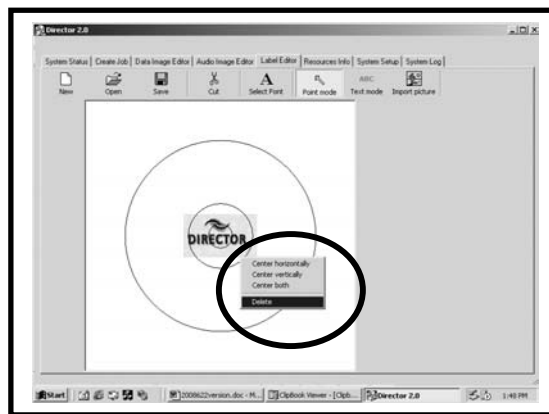
- Click the *Point* button on the toolbar.
- Right-click on the text or graphic image. A pop-up menu, as depicted below, will appear.
- You may center text horizontally only. You may choose to center graphics horizontally, vertically, or both. Clicking on the “Center” pop-up menu option centers the graphic horizontally and vertically.



Deleting Text, Graphics And Dates

To delete a piece of text, a graphic image or a date field after it has been created or imported:

- Click the *Point Mode* button on the tool bar.
- Click the piece of text or graphic image you wish to delete.
- Click the *Delete* button on the menu bar or press the **DELETE** key on the keyboard. Optionally, you may right-click on the object as described in “Centering Text and Graphics” and then select delete in the pop-up that appears.



Saving the Current Disc Label

Once a disc label has been created, it must be saved in order for the DIRECTOR EC to use it as a source label for printing. Disc labels are saved as files with an “LBL” extension. To save a disc label:

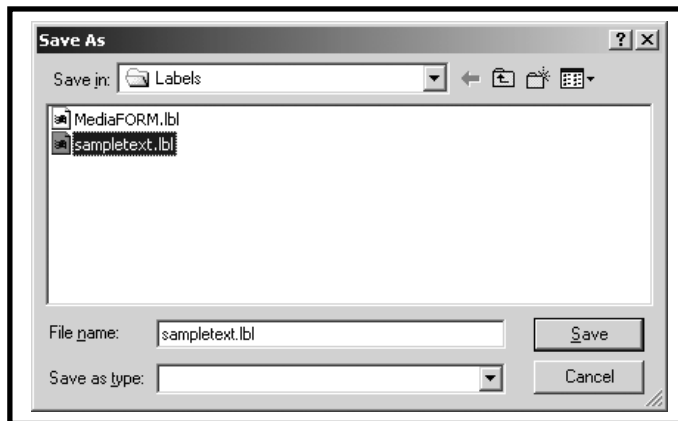
- Click the *Save* button on the menu bar.
- Select the proper folder where you want to save the disc label file.
- Enter the name for the disc label file and click the *Save* button.



Opening Existing Disc Labels

Once a disc label has been saved it can be modified at a later date. To open an existing disc label file:

- Click the *Open* button on the menu bar.
- Select the appropriate file and click the *Open* button.



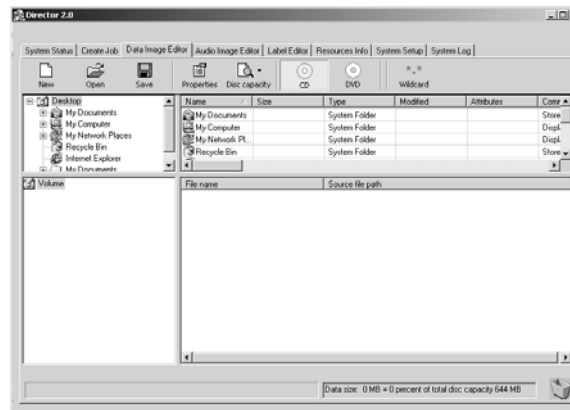
Creating Disc Images

After creating a label, the next step in constructing a CD is to specify its contents (disc image). The DIRECTOR EC creates industry standard data (Mode 1 ISO 9660 level 2 with Joliet extensions) and audio (Red Book) CDs from scratch as well as duplicates existing CDs authored in most formats. In this section we cover how to create the CD contents from files residing on the local system or a remote system connected via a network. If you already have a CD and simply wish to copy it, refer to the section entitled *Duplicating Existing CDs*.

Data Disc Images

To create a data disc image:

- Click the **Data Image Editor** tab. The screen will now display:



The **Data Image Editor** tab is divided into four panes. The top left pane lists all of the names and icons of the files and folders on the currently selected disk drive (source). The top right pane displays the contents of any item you click on in the top left pane along with its icon. The bottom left pane lists all the names and icons of files and folders on the CD that is being created (disc image). The bottom right pane displays the contents of any item you click on in the bottom left pane along with its icon.

Data Image Editor Toolbar

Horizontally at the top of the panes, which contains eight buttons: *New Open, Save, Properties, Disc Capacity, CD, DVD, Wildcard.*



Data Image Editor Toolbar:

New Folder	Creates a new volume.
Open	Opens an existing folder on the disc image.
Save	Saves files or folders .
Properties	Displays properties about the image: volume title, Publisher, Data Preparer, Copyright File, Abstract File and Bibliographic File
Disc Capacity	Allows selection of capacity of discs loaded into Director EC i.e. 74 minute/650MB, 80 minute/700MB, <i>DVD 3.95GB and DVD 4.7GB.</i>
CD	Lets Director EC know CD media is in use.
DVD	Lets Director EC know DVD media is in use.
. Wildcard	Allows specification of dynamic content

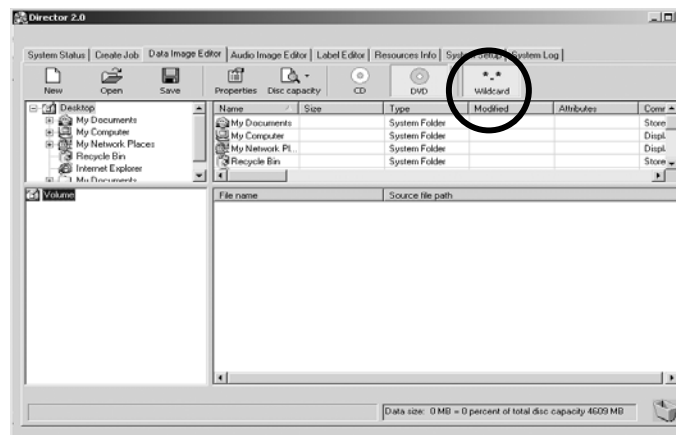
Static And Dynamic Content

The DIRECTOR EC allows CDs to be created from both *static* and *dynamic* content. A finished CD created from *static* content will contain the exact files and folders that are specified when the disc image is created. A finished CD created from *dynamic* content will contain the files and folders that exist in specified locations at the time the job is submitted for recording (rather than when the disc image is created).

For example, specifying *dynamic* content when creating a CD layout would allow a job to be run every week that records the contents of a specific folder onto a CD without having to create a new disc image every time. In this case the contents of the folder (not the folder itself) can change.

To specify a file or folder on a disc image as containing dynamic content:

- Highlight the Volume which will be using dynamic source then Click the *. * check box.



Note: Please be sure not to exceed the capacity of the disc being used.

Adding Files And Folders

- Click the desired file or folder in the top left or right pane (source) and hold down the mouse button.
- Drag the file or folder over the CD icon in the lower right then release the mouse button
- Files and folders can also be added to the disc image using the *Open* button. A box appears choose the image and click the *Open* button the image will be added.

Removing Files And Folders

- Click the desired file or folder in the bottom left or right pane (disc image)
- Right click the file or folder and choose *Delete* from the toolbar which appears.

Creating New Folders

- Click the desired root or folder area in the left or right pane (disc image).
- Click the *New Folder* button on the toolbar.

Naming A Folder

- Right click the desired folder in the bottom left or right pane (disc image).
- Choose *Rename* from the drop down menu, which appears.

Saving The Current Disc Image File

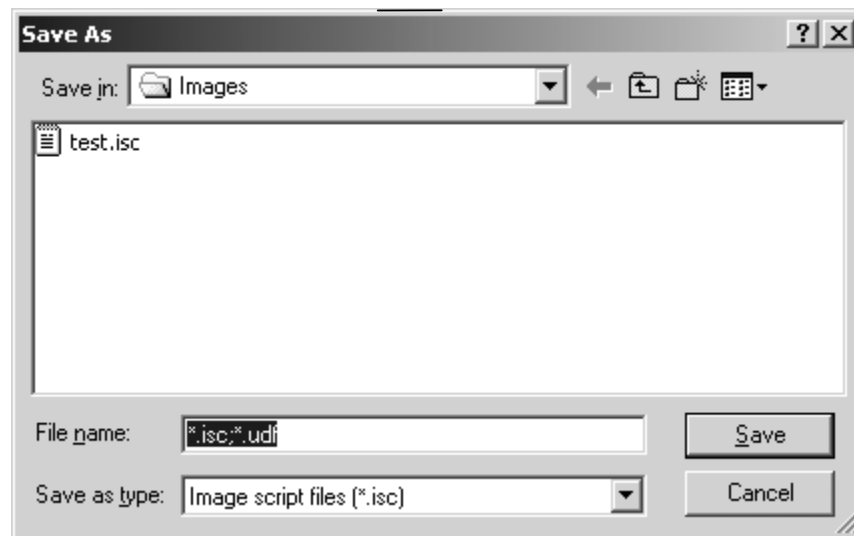
Once a data disc image has been created, it must be saved for the DIRECTOR EC to use it as a data source for recording. Disc images can either be saved as script files (with an “ISC” extension) or physical image files (with an “ISO” extension).

A script file (ISC) contains pointers to the source data files and is used as a guide at the time of recording the CD. Since a script file does not include the source data it is best used when producing unique projects with dynamic content, or when the source data will always be available to the DIRECTOR EC. Or, if producing software, a “static” image would be best to ensure content.

A physical image file (ISO) is an exact replica of the final CD and contains all of the source data. It is therefore best used when producing static projects that are recorded on a regular basis, and when source data will not always be available to the DIRECTOR EC. Please note that, depending upon the amount of data to be recorded, a physical image file can occupy as much as 700 MB of hard disk space.

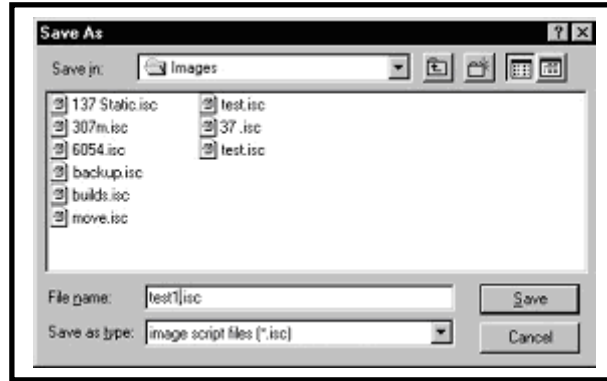
To save a data disc image script file:

- Click the *Save* button on the toolbar. The screen will now display:



The file will automatically be saved with the *.isc* extension.

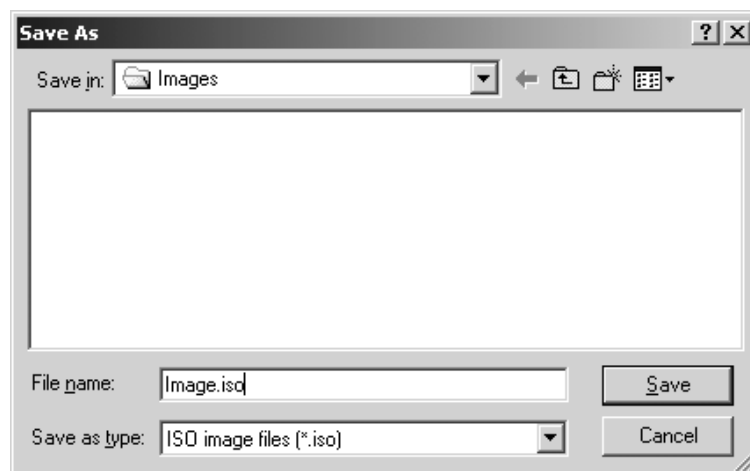
- Click the *OK* button. The screen will now display:



- Select the volume and directory where you want to save the script file.
- Enter the name for the script file and click the *Save* button.

To save a disc physical image file:

- Click the *Save* button on the toolbar. The screen will now display:



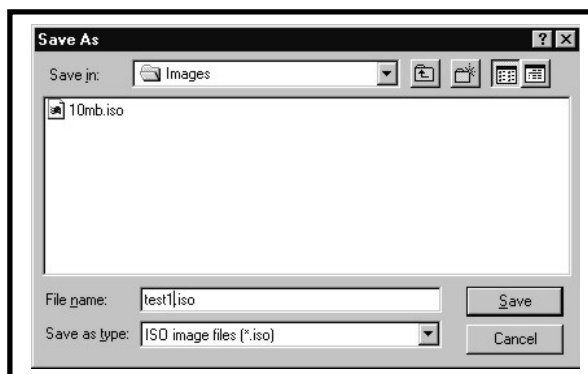
- Select the volume and directory where you want to save the image file.
- Enter the name for the image file.
- Change you the *Save as type*: to ISO.

This will make a standard ISO 9660 image file to the desired location.

Volume Properties

Volume Label	Enter the name you want to call the CD.
Publisher	Enter the name of the publisher.
Data Preparer	Enter the name of the person who prepared the CD.
Copyright File	Enter the file name that provides copyright information about the CD.
Abstract File	Enter the file name that describes the contents of the CD.
Bibliographic File	Enter the file name that provides bibliographic information about the CD.

- Click the *OK* button. The screen will now display:



- Select the volume and directory where you want to save the physical image file.
- Enter the name for the physical image file and click the *Save* button.

Loading An Existing Script File

Once a data disc image script file has been saved it can be modified at a later date.

To load an existing script file:

- Click the *Load Script* button on the toolbar. The screen will now display:



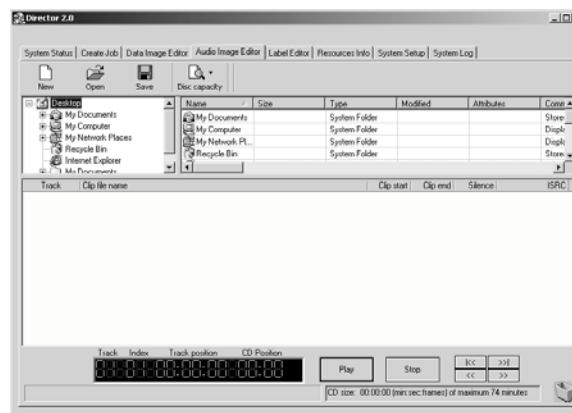
- Select the appropriate file and click the *Open* button.

Audio Disc Images

The DIRECTOR EC creates industry standard audio (Red Book) CDs from scratch that can be played on any home, car or portable compact disc audio player or computer CD or DVD-ROM drive. Audio tracks are created using any combination of 44.1 kHz, 16 bit stereo WAV or MP3 files.

To create an audio disc image:

- Click the *Audio Image Editor*. The screen will now display:



The **Audio Image Editor** tab is divided into three panes. The top left pane lists all the names and icons of the disk drives available to the DIRECTOR EC, as well as files and folders on the currently selected disk drive (source). The top right pane displays the contents of any item you click on in the top left pane along with its icon. The bottom pane lists the names of audio files on the CD, which is being created (disc image) as well as their type (WAV or MP3), start position and end position, silence option (inserts silence into the audio disc image) and ISRC code.

Audio Image Toolbar

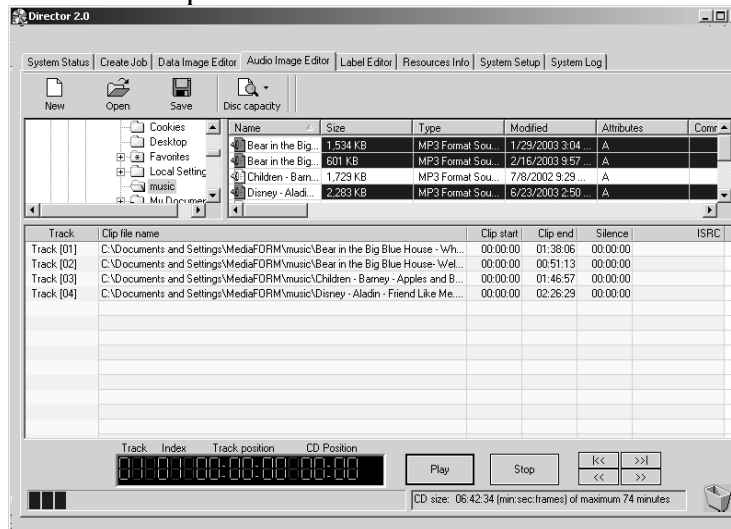
Horizontally along the top above the panes is a toolbar that contains five buttons: **New**, **Open**, **Save**, and **Disc Capacity**.

Image Toolbar:

New	Creates a new audio disc image.
Open	Opens an existing audio disc image script folder to allow selection of an existing file (*.ISC)
Save	Saves the current disc image contents to an audio disc image script file (*.ISC).
Disc Capacity	Selects the capacity of the CD-R or CD-RW discs that are loaded into the DIRECTOR EC: 74 minutes/650 MB or 80 minutes/700 MB. (<i>DVD 3.95GB and DVD 4.7 GB are not used</i>).

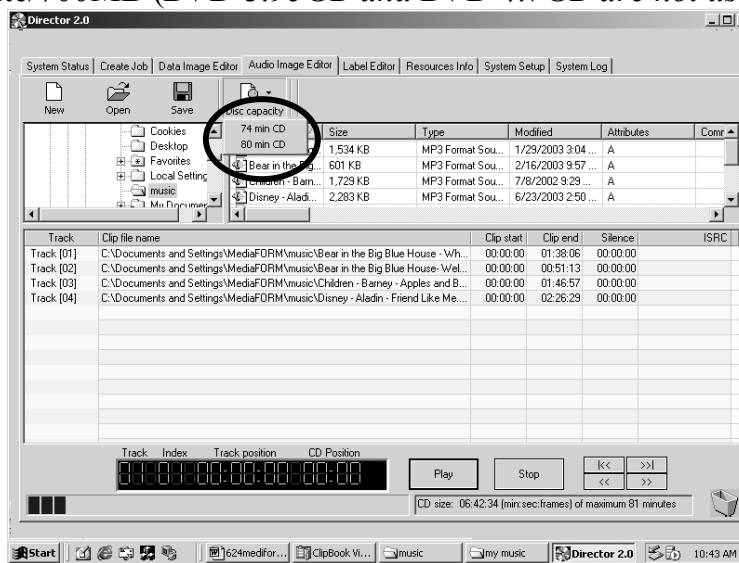
Adding Tracks

- As depicted below, drag one or more WAV / MP3 files onto the text. Multiple files may be selected by pressing and holding down the SHIFT or CTRL key while clicking on the tracks. SHIFT allows you to select a range of contiguous tracks, while CTRL allows you to randomly pick multiple tracks. As additional tracks are added, drag and drop them in at the desired insertion point.



Selecting CD Capacity

On the horizontal toolbar is a button to select the capacity of the CD-R or CD-RW discs that are loaded into the DIRECTOR EC: 74 minute/650MB or 80 minute/700MB (*DVD 3.95GB and DVD 4.7GB are not used*).



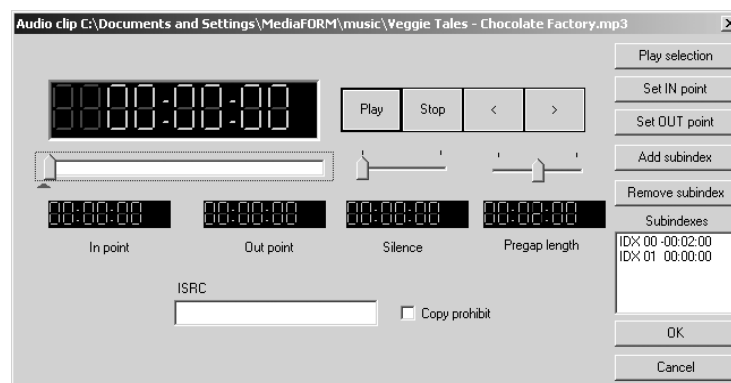
The Disc Capacity will displayed in the lower right hand corner

Removing Tracks

- Right click on the audio track you wish to delete.
- Choose *Delete Track* from the drop down menu.

Editing A Track

- Right click the track to be edited. The screen will now display:



The right hand buttons have the following options:

- Play Selection
- Set IN Point
- Set OUT Point
- Remove Subindex

These options allow custom changes to the tracks. Choosing *OK* sets the changes and *Cancel* cancels the changes.

Changing ISRC Codes And Copy Prohibit Flags

Note:

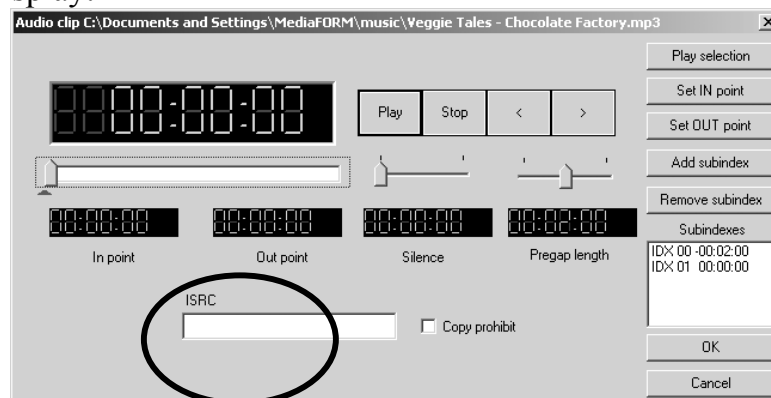
DIRECTOR EC systems equipped with Pioneer DVD-R drives do not support MF Digital SmartDRIVE features.

The INTERNATIONAL STANDARD RECORDING CODE (ISRC) is an optional 12-character descriptor that identifies a specific track on an audio CD. Each track can have its own unique ISRC consisting of 2 alphanumeric characters (country), 3 alphanumeric characters (owner), 2 digits (year of recording) and 5 digits (serial number).

The COPY PROHIBIT flag is a setting in each track on an audio CD, indicating whether or not that track can be copied by a digital recorder.

To change an ISRC code:

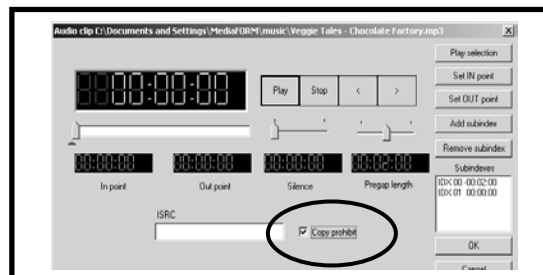
- Double click the desired audio track in the lower pane. The screen will now display:



- Enter the code in the ISRC line and click the *OK* button.

To change a Copy Prohibit flag:

- Double click the desired audio track in the lower left pane. The screen will now display:



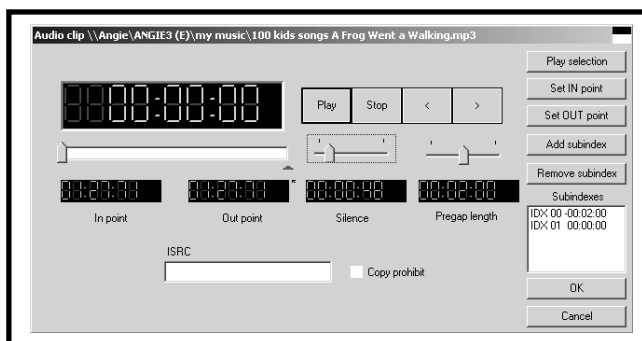
- To enable *Copy Prohibit* select the *Copy Prohibit* box so that it is checked, or uncheck the box to disable *Copy Prohibit*.

Inserting, Editing And Removing Silence

When assembling an audio CD disc image the DIRECTOR EC application does not insert silences (gaps) between tracks.

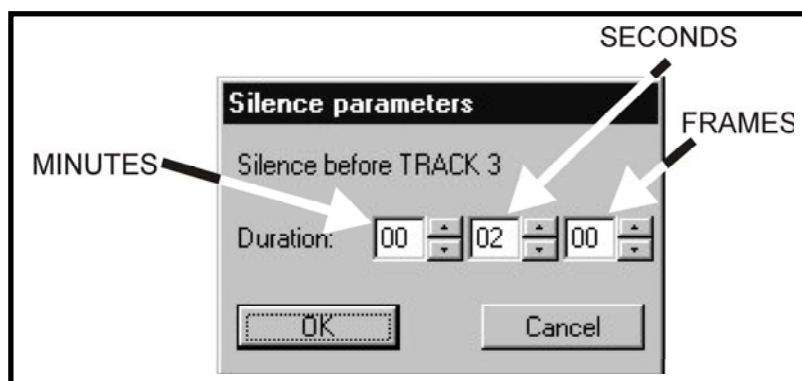
To insert silence between tracks:

- Right click the track that is to be edited. Choose “*Edit*” on the drop down menu
- A pop up screen appears. The *Silence* option appears in the middle of the screen with a slide control. Slide the control to the preferred length of silence. In the example: 48 seconds.



To edit the amount of silence between tracks:

- Double click the silence indicator you wish to edit in the lower left pane. The screen will now display:



- Click the up and down indicators to increase or decrease the duration of the silence (minutes, seconds, frames).
- Click the *OK* button.

To remove silence between tracks:

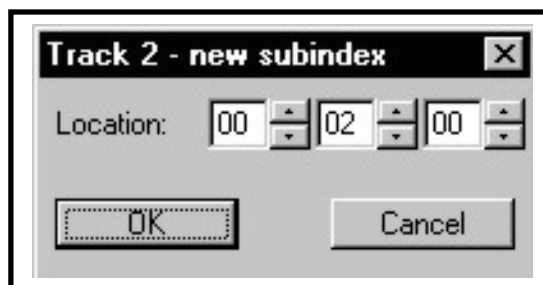
- Click the silence indicator you wish to remove in the lower left pane and hold down the mouse button.
- Drag the silence indicator over the trashcan in the bottom right of the
- *WaveMan* tab and release the mouse button.
- Click the *Yes* button.

Inserting, Editing And Removing Sub-indexes

Sub-indexes are markers used by CD audio players to locate specific points inside an audio track. Sub-index 0 indicates the start of any silence before the beginning of a track and sub-index 1 indicates the beginning of a track's audio material. Other sub-indexes can also be assigned to allow some audio players to locate specified material within a track itself.

To insert sub-indexes in a track:

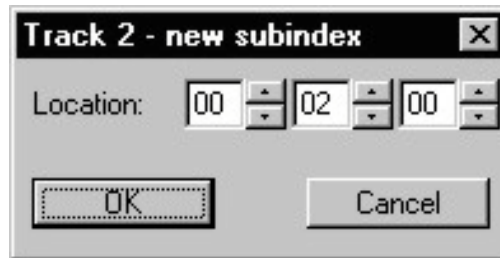
- Click the audio track you wish to edit in the lower left pane and its existing sub-indexes will be displayed in the bottom right pane.
- Click the *Insert Sub-index* button. The screen will now display:



- Click the up and down indicators to specify the location of the sub-index (minutes, seconds, frames).
- Click the *OK* button.

To edit sub-indexes:

- Click the audio track you wish to edit in the lower left pane, and its existing sub-indexes will be displayed in the bottom right pane.
- Double click the sub-index you want in the bottom right pane. The screen will now display:
- Click the *Insert Sub-index* button. The screen will now display:



- Click the up and down indicators to specify the new location of the sub-index (minutes, seconds, frames).
- Click the *OK* button.

To remove sub-indexes:

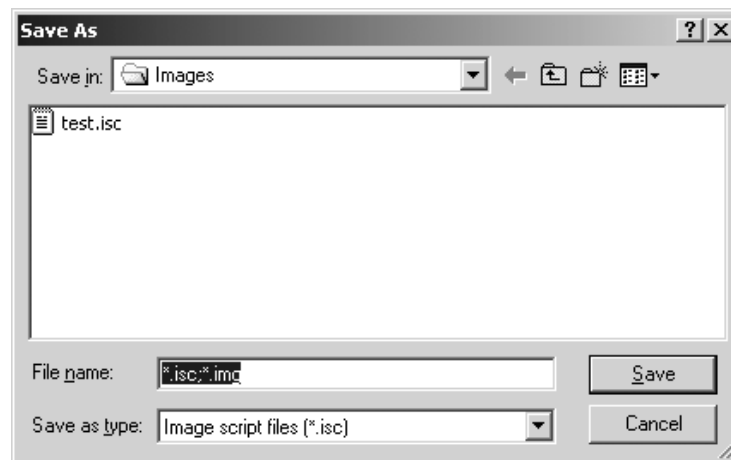
- Click the audio track you wish to edit in the lower left pane and its existing sub-indexes will be displayed in the bottom right pane.
- Click on the sub-index you want in the bottom right pane and hold down the mouse button.
- Drag the sub-index over the trashcan in the bottom right of the *Audio Image Editor* tab and release the mouse button.
- Click the *Yes* button.

Saving The Current Audio Disc Image

Once an audio disc image has been created it must be saved so that it can be used by the DIRECTOR EC as an audio source for recording. Disc images are saved as script files (with an "ISC" extension).

To save an audio disc image script file:

- Click the *Save* button on the toolbar. The screen will now display:



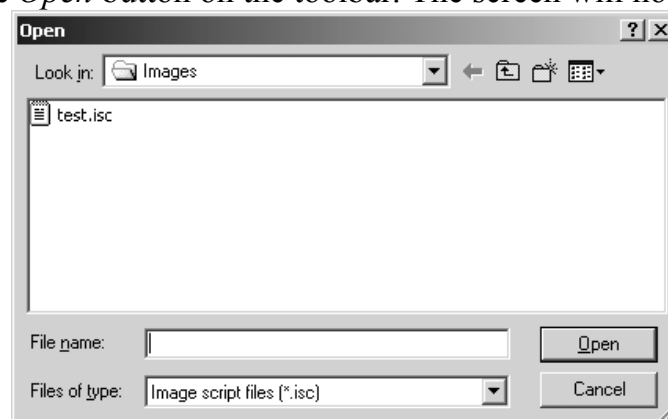
- Select the volume and directory where you want to save the script file.
- Enter the name for the audio disc script file and click the *Save* button.

Loading An Existing Audio Disc Image

Once an audio disc image script file has been saved it can be modified at a later date.

To load an existing audio disc image script file:

- Click the *Open* button on the toolbar. The screen will now display:



- Select the appropriate file and click the *Open* button.

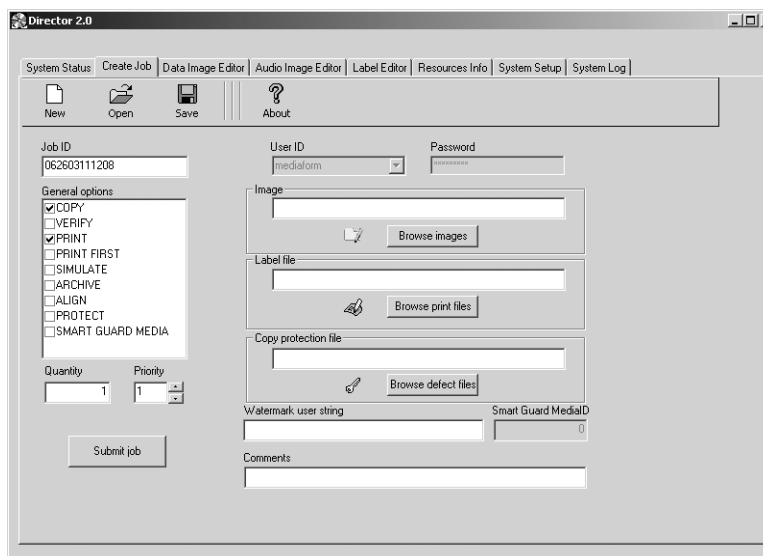
Creating Jobs

After creating a data or audio disc image, the next step in constructing a CD is to create or define a job. A job brings together the various elements of the CD (label, disc image, etc.) so they can be recorded and printed.

Creating New Jobs

To create a new job:

- Click the **Create Job** tab. The screen will now display:



The **Create Job** tab is divided into a number of check boxes and information fields that must be completed.

Job Menu Bar

Horizontally along the top of the **Job** tab is a menu bar that contains five buttons: *New*, *Open*, *Save*, *About*, *Help*.

Job Menu Buttons:

New	Creates a new job.
Open	Loads an existing job file (*.JOB).
Save	Saves the current job file (*.JOB).
About	Displays the current version information of the DIRECTOR EC application.

Help Displays on-screen help.

General Options

Note:

DIRECTOR EC systems equipped with Pioneer DVD-R drives do not support MF Digital SmartDRIVE features.

Vertically along the left side of the **Job** tab is a series of nine check boxes: *Copy, Verify, Print, Print First, Simulate, Archive, Align, SmartGuard Media*. The first step in creating a job is to set the general options so as to define which operations the DIRECTOR EC will perform when the job is submitted for production.

- Check or uncheck the option boxes to enable or disable the production options needed for your job:

General Options:

Copy	When checked, the CDs in the submitted job will be recorded using the disc image file selected in the IMAGE field.
Verify	When checked, the CDs in the submitted job will automatically be compared against the source files after recording is completed.
Print	When checked, the CDs in the submitted job after recording will be printed with the disc label selected in the LABEL FILE field.
Print First	When checked, the CDs in the submitted job before recording will be printed with the disc label selected in the LABEL FILE field.
Simulate	When checked, the CDs in the submitted job will not be recorded.
Archive	When checked, an existing CD is saved to the hard drive as a physical image file for later recording. This option is used for duplicating existing CDs.
Align	When checked, CDs will be placed on the optical aligner so that the disc may be oriented relative to the alignment mark. This is used for over-printing silk-screened discs.

SmartGuard Media * 48x ProDRIVE only *****

This option, when the only item checked, allows you to generate SmartGUARD Media for use with MF Digital stand-alone duplicators. SmartGuard Media allows you to lock-in your stand-alone duplicator to specific media giving the owner control over what media is used. DIRECTOR ECs equipped with Pioneer DVD-R drives or any drive other than the ProDRIVE 48x, DO NOT support MF Digital SmartDRIVE features.

- After setting the general options, complete the required information in the related information fields:

Job ID (Required)

The JOB ID field is a user-defined descriptor that assists in identifying and tracking CDs produced on the DIRECTOR EC. Jobs can be given meaningful names such as date codes. In addition, jobs may receive product, invoice or work order numbers.

- Click the JOB ID field and enter a name for the job to a maximum of 20 alphanumeric characters.

User ID (Required)

The USER ID field is a descriptor that assists in identifying and tracking users operating the DIRECTOR EC. User IDs are defined using the ***System Setup*** tab.

- Click the USER ID field and enter your assigned User ID.

Password (Required)

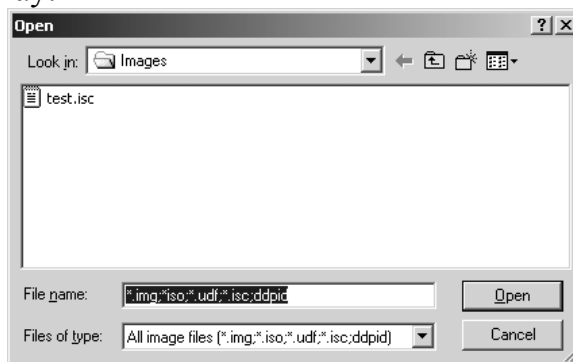
The PASSWORD field assists in controlling access to the DIRECTOR EC. Passwords are assigned to specific User IDs using the ***System Setup*** tab.

- Click the PASSWORD field and enter your assigned password.
-

Image (needed if "Copy" option is checked)

The IMAGE field is used to specify the data or audio disc image, (ISC or ISO file) that was previously created, to be used as the data or audio source for recording. The DIRECTOR EC also accepts standard Mode 1 data physical image files (such as ISO 9660, MacOS HFS, Unix UFS and Rock Ridge, etc.) created with other pre-mastering software (such as Roxio Easy CD Creator and Toast, GEAR Software GEAR Pro, etc.).

- Click the *Browse Images* button below the IMAGE field. The screen will now display:

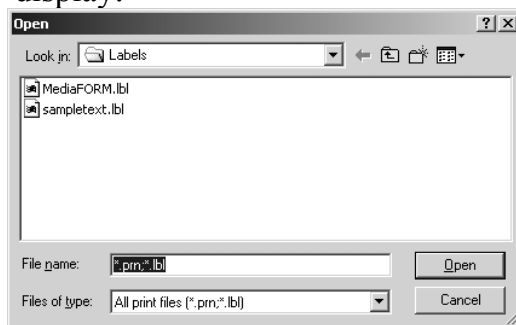


- Select the appropriate file and click the *Open* button. Leave the field blank if no image is to be recorded.

Label File (Optional)

The LABEL FILE field is used to specify the disc label (LBL or PRN file), that was previously created, to be used as the source label for printing.

- Click the *Browse Print Files* button below the LABEL FILE field the screen will now display:



- Select the appropriate file and click the *Open* button. Leave the field blank if no label is to be printed.

SmartGuard Media ID

Note:

DIRECTOR EC systems equipped with drives other than the 48 ProDRIVE such as Pioneer DVD-R drives or the 52x ProDRIVE do not support this feature.

This option allows you to create SmartGUARD Media for use with MF Digital stand-alone duplicators (CD-5000 or Scribe EC Standalone). SmartGuard Media allows you to lock-in your stand-alone duplicator to specific media, giving the owner control over what media is used.

- Click the SmartGUARD MediaID field and enter the desired numeric ID (consisting of up to six digits 0 to 9 only). Leave the field blank if no string is to be recorded.

Comments (Optional)

The COMMENTS field is a user-defined descriptor that is entered into the database of all jobs completed by the DIRECTOR EC. The COMMENTS field can contain meaningful information such as documenting operator observations.

- Click the COMMENTS field and enter your remarks. Leave the field blank if no information is to be logged into the database.

Quantity (Required)

The QUANTITY field is used to specify the number of discs to be recorded or printed as part of the current job.

- Click the QUANTITY field and enter the number of discs to be recorded or printed.

Priority (Required)

The PRIORITY field is used to specify the production priority assigned to the current job (1 lowest - 99 highest). The maximum allowable priority is determined by a specific user's privileges assigned using the **Setup** tab.

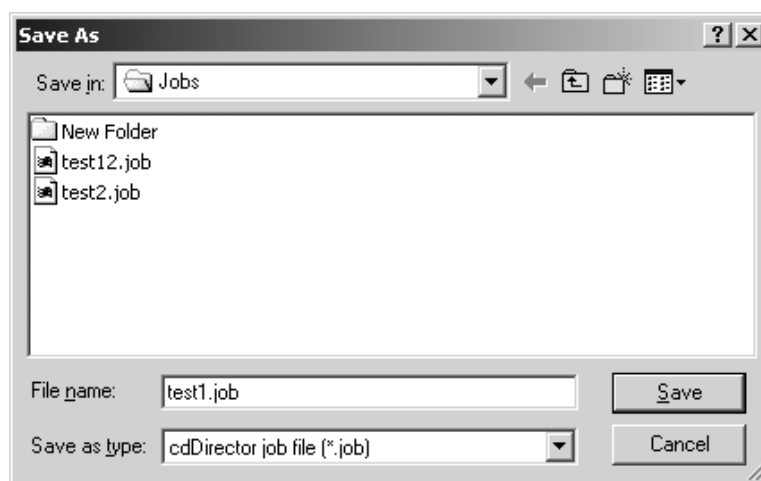
- Click the PRIORITY field and enter the priority number.

Saving The Current Job

Once a job has been created it can be saved and used by the DIRECTOR EC for future recording. Job files are saved as job files with a "JOB" extension.

To save a job file:

- Click the *Save* button on the menu bar. The screen will now display:



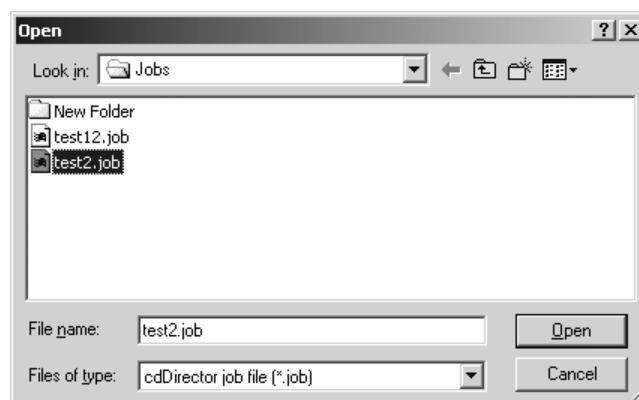
- Select the volume and directory where you want to save the job file.
- Enter the name for the job file and click the *Save* button.

Loading An Existing Job

Once a job file has been saved it can be modified at a later date.

To load an existing job file:

- Click the *Open* button on the menu bar. The screen will now display:



- Select the appropriate file and click the *Open* button.

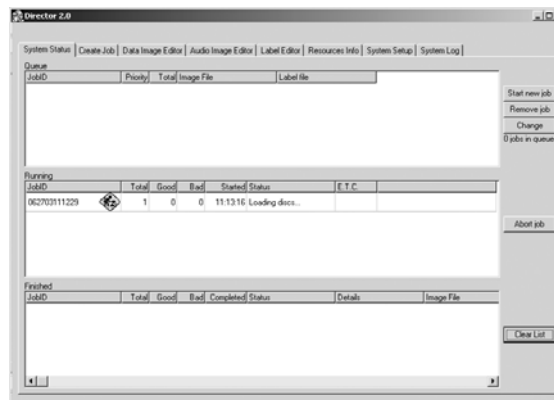
Submitting Jobs

After defining or creating a job, the final step in constructing a CD is to submit the job for production. During the production process the DIRECTOR EC uses the job as a guide or map for bringing together the various elements of the CD (label, disc image, etc.) to print and record as needed. The DIRECTOR EC processes up to eight different jobs simultaneously and offers unlimited job queuing.

Submitting A Job

To submit a job for production:

- Complete the details on the **Job** tab as desired or load an existing job file.
- Click the *Submit Job* button at the bottom of the **Job** tab. The screen will now display:



The screen is now switched to the **Status** tab where the progress of jobs submitted for production can be easily monitored. The **Status** tab is divided into three panes. The top pane is the JOB QUEUE window which lists all of the jobs waiting to be processed by displaying their assigned JobID, their assigned priority, the total number of requested CDs as well as the names of their associated disc image and label files.

The middle pane is the ACTIVE JOBS window that lists all the jobs currently being recorded or printed by the DIRECTOR EC. Information displayed for each job includes: its assigned JobID, the total number of requested CDs, the number of successful CDs produced, the number of failed CDs produced, the time the job was submitted for production, the

immediate status of the job (copying images, loading discs, copying discs, unloading discs, etc.), and the estimated time of completion (E.T.C).

The lower pane is the COMPLETED JOBS window that lists all the jobs completed by the DIRECTOR EC. Information displayed for each job includes: its assigned JobID, the total number of requested CDs, the number of successful CDs produced, the number of failed CDs produced and the time each of the jobs was completed.

The Production Process

During production the blank discs will be loaded one at a time from the input spindle into the recorders and/or printer. Upon successful completion the discs will be unloaded onto the output spindle. This process will continue until the job is complete, and the DIRECTOR EC will then advance to produce the next job in the queue according to its priority.

However, if the 1st input spindle empties before the job is complete the DIRECTOR EC will then go to the 2nd input spindle. If the 2nd input spindle is empty the DIRECTOR EC will go to the third spindle. If the third spindle is empty the screen will now display:



To continue producing the job, place additional blank discs onto the 1st input spindle and click the *Yes* button. To stop the job click the *No* button and the remainder of the job will be aborted. The DIRECTOR EC will then advance to produce the next job in the queue according to its priority.

Note:

Any discs dropped on the reject/centering spike have failed to record properly and should not be used. Be sure to remove rejected discs periodically during operation, if the need arises.

Removing A Job

To remove a pending job from the queue so that it will not be produced:

- Click the job you wish to remove in the JOB QUEUE window.
- Click the *Remove Job* button.

Clearing The Completed Jobs List

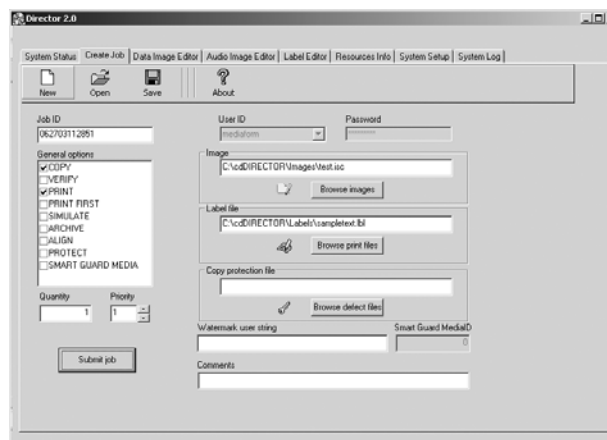
To clear the list of completed jobs:

- Click the *Clear List* button.

Starting A New Job

To start a new job:

- Click the *New* button. The screen will now display:



The screen is now switched to the **Create Job** tab where new jobs can be created or existing job files can be loaded and submitted for production.

Aborting A Job

To abort a job once its production has begun:

- Click the job you wish to abort in the ACTIVE JOBS window.
- Click the *Abort Job* button.

Viewing Logs

The DIRECTOR EC maintains a comprehensive database of all jobs completed by the unit. The collected information is useful for a variety of reasons such as, tracking disc usage, helping to diagnose problems, or even for billing clients. The **Log** tab provides an easy way to review the history of all jobs completed by the DIRECTOR EC.

To display the DIRECTOR EC's history log:

- Click the **System Log** tab. The screen will now display:



The **System Log** tab consists of one central JOBLOG windowpane, containing all job related information.

Updating Job Records

To update job records in the history log:

- Click the **Refresh** button at the bottom of the JOBLOG window.

Navigating Job Records

To navigate among job records in the history log.

- Use the scroll bar at the bottom of the JOBLOG window to move left or right.
- Use the **Database Navigator** buttons to advance from record to record or to move to the top or bottom of the database.

Deleting Individual Job Records

To delete a job record from the history log:

- Click the job name you wish to delete and click the *Delete Record* button at the bottom of the JOBLOG window.

Deleting All Job Records

To delete all job records from the history log:

- Click the *Purge* button at the bottom of the JOBLOG window.

Resubmitting Jobs

To resubmit a job for production:

- Click the job name you wish to resubmit and click the *Resubmit* button at the bottom of the JOBLOG window.

Duplicating Existing CDs

In addition to creating industry standard data and audio CDs source files, the DIRECTOR EC also duplicates existing CDs authored in most formats.

Creating An Image File

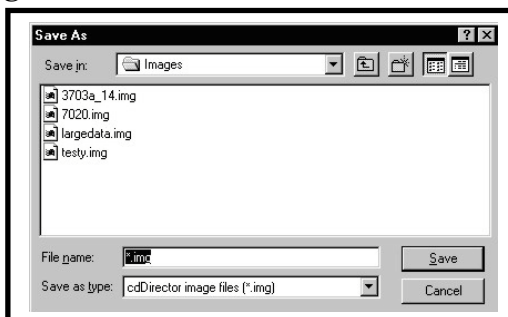
The first step in duplicating an existing CD is to create an image file of it on the hard disk drive to be used as the master source for recording. Image files are saved with an “IMG” extension.

To create an image file of an existing CD:

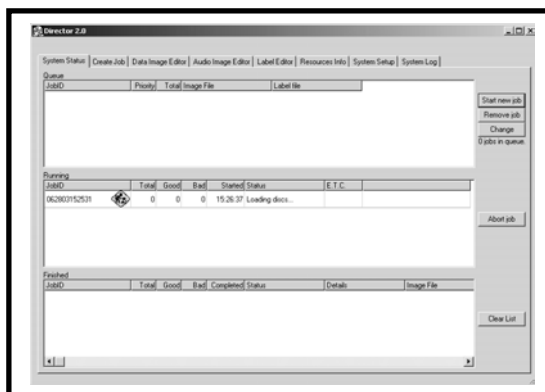
- Click the **Create Job** tab. The screen will now display:



- Check the ARCHIVE box in the general options window. Ensure that no other boxes are checked.
- Click the QUANTITY field and enter 0.
- Click the JOB ID field and enter a name for the job to a maximum of 20 alphanumeric characters.
- Click the USER ID field and enter your assigned User ID.
- Click the PASSWORD field and enter your assigned password.
- Click the **New Image** button below the IMAGE field. The screen will now display:



- Select the volume and directory where you want to save the image file. Please note that depending upon the amount of data to be recorded the image file can occupy as much as 700 MB of hard disk space.
- Enter the name for the image file and click the *Save* button.
- Place your original CD to be duplicated (master disc) on top of the stack of blank discs on the input spindle.
- Click the *Submit Job* button. The screen will now display:



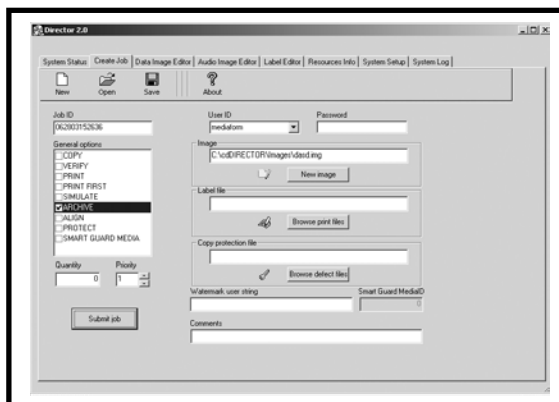
The screen is now switched to the **Status** tab to display the progress of the submitted job. During production the master disc will be loaded from the input spindle into the top recorder, and saved as an image file with the specified name on the hard disk drive. Upon successful completion, the disc will be unloaded onto the output spindle.

Recording An Image File

Once created, the image file of the master disc is used as the source for recording.

To use the image file of the master disc as the recording source:

- Click the **Create Job** tab. The screen will now display:



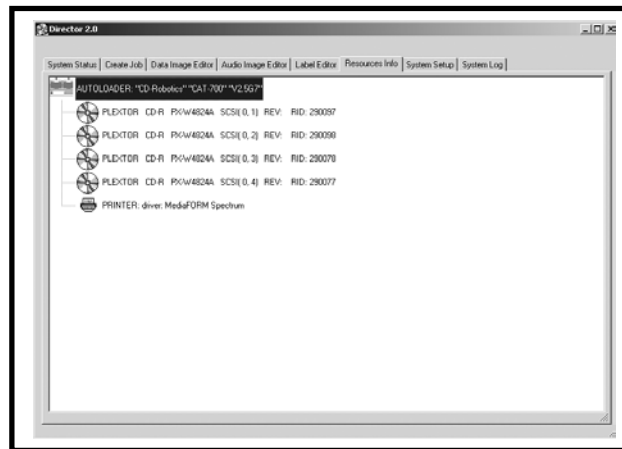
- Adjust the general options and complete the information on the **Create Job** tab as required. When completing the IMAGE field specify the image file created from the master disc to be duplicated.

Viewing Resources

The **Resource** tab is a simple diagnostic tool that displays the hardware elements connected to the DIRECTOR EC. These include the disc autoloader, CD-R/RW recorders and the printer.

To display the hardware elements connected to the DIRECTOR EC:

- Click the **Resources Info** tab. The screen will now display:



The **Resource Info** tab on a properly configured and correctly functioning DIRECTOR EC system will display one autoloader, eight, four, or two CD-R/RW or DVD-R recorders (including ID string, SCSI channel and ID, and firmware version) as well as one printer.

Upgrading DIRECTOR EC Software

Overview of the process

Note:

Do not remove the previous version of Director EC software from the add/remove program applet.

- Download the zipped files
- Unzip the downloaded files and save it as c:\cdDIRECTOR\cdDIRECTOR XXX
- Reboot the PC
- Run Setup.exe found in as c:\cdDIRECTOR EC\cdDIRECTOR XXX– choose all the default options

Download Zipped files

- Click on the link provided in the email. This will take you directly to the appropriate web site to start the download. Unknown file type message box will popup with 4 option buttons.
- Click on [save to file]. You could save it anywhere you wish to but make a note of the location of the folder. You require this to locate the file for unzipping. Saving Location message box will appear with progress bar. Once it is saved the Saving Location message box will disappear.

Note:

Above description is for Netscape browser. Internet Explorer might be slightly different.

Extract the Zipped files

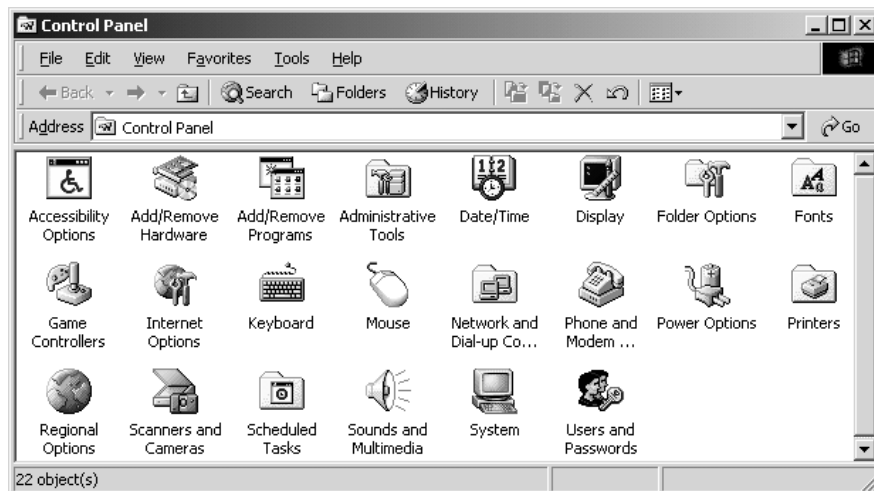
- Unzip the downloaded files and save it as c:\cdDIRECTOR\cdDIRECTOR XXX
- Browse to the location where the zipped file was saved.
- Double Click on the cddirXXX.zip folder to open WinZip window. Click on [I agree] to open WinZip-cddirXXX window.
- Click on Extract icon. Extract Window will appear. In the Folders/drives box select c:\cdDirector EC folder. You will see c:\cdDIRECTOR in the Extract to pull down box. Append \cdDIRECTOR XXX to this box to create a new folder and click the [extract].
- Close WinZip-cddirXXX.zip window.

Changing Computer Name

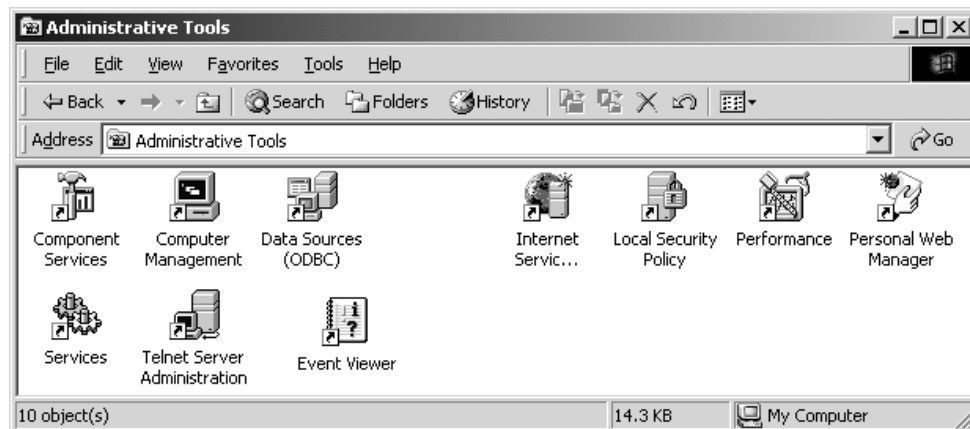
1. Disconnect computer in the Internet Service Manager (ISM)
2. Change the Computer name
3. Change Anonymous user account and password
4. Reboot the computer

Disconnecting computer in the Internet Service Manager (ISM)

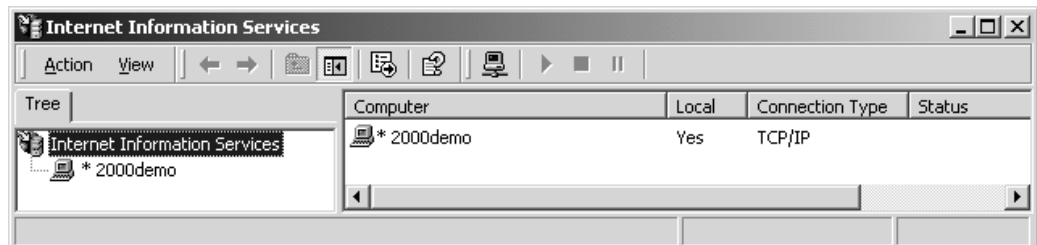
- From desktop Click start, settings, control panel at this point the screen will appear as below.



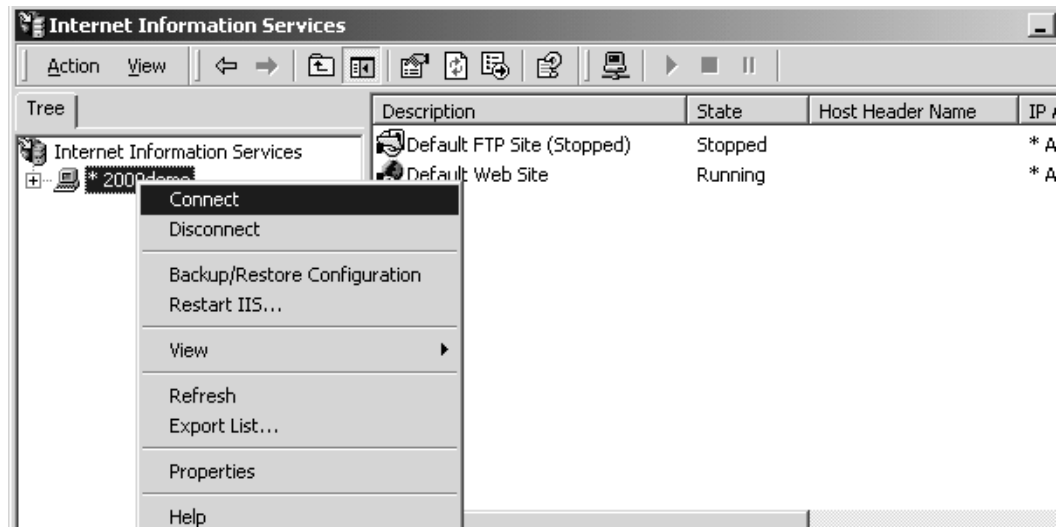
- Double click the administrative tools – the following window will appear.



- Right Click on the computer icon with the name results in the following window



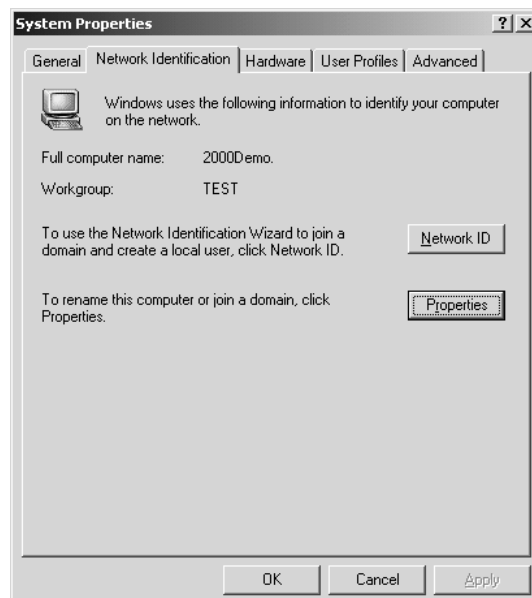
- Right Click on the computer name to reveal the following window



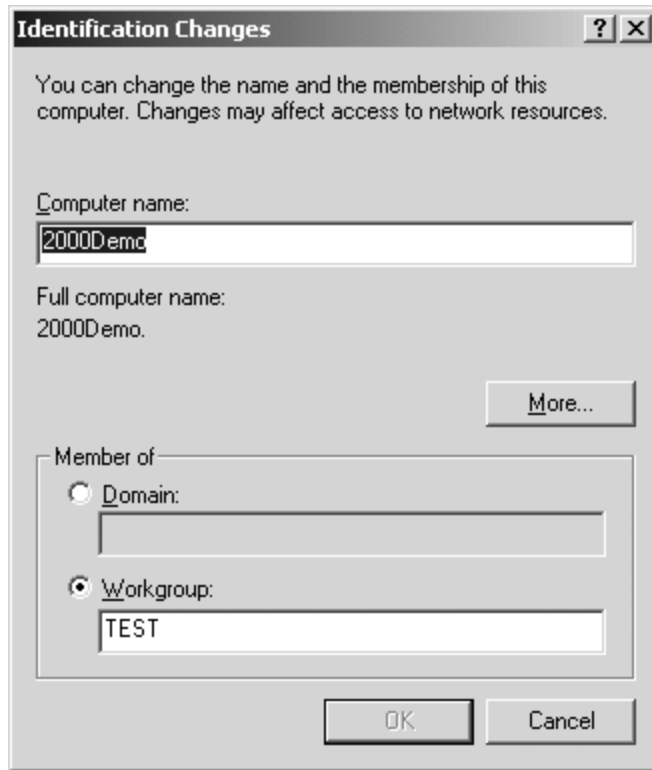
Although “Connect” is highlighted, select disconnect. When computer name is changed, a reboot is required and upon reboot ISM will automatically connect. Now you are able to change the Computer name as follows.

Changing the Computer Name

- From desktop, right click on the computer icon and click on *Properties* to open *System Properties* window.



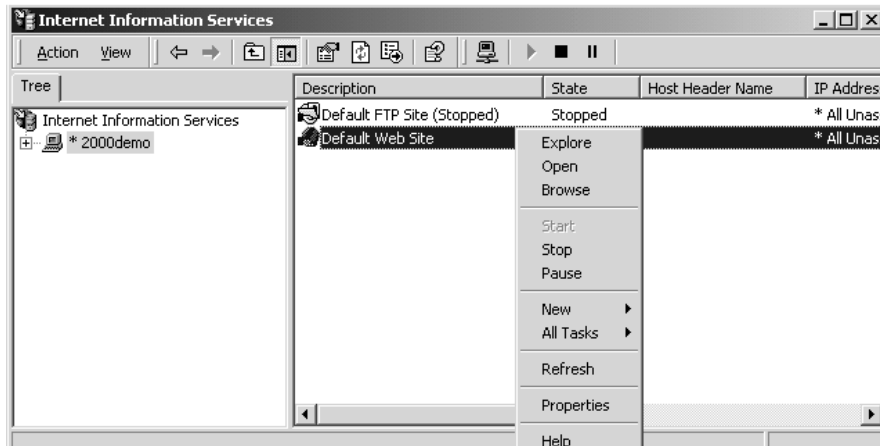
- Click [Properties] button to open the Identification changes window



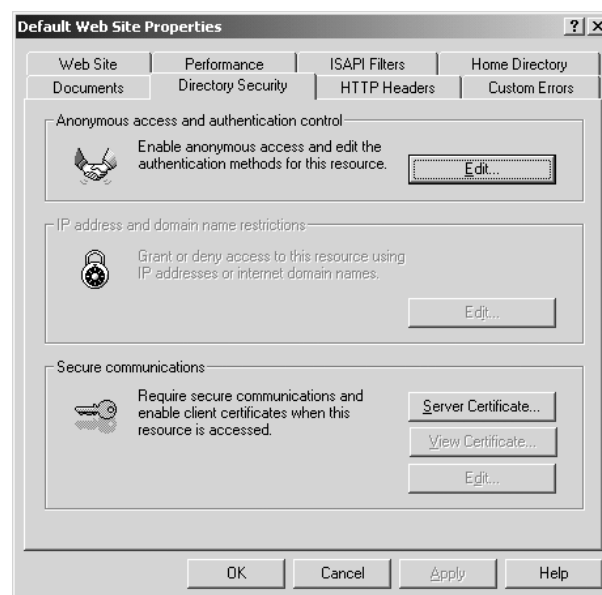
- Key in the new computer name in the computer name box, and click [OK]. Need to reboot the system for the new name to be effective.

Change the Anonymous Account

- Open ISM window as instructed previously
- Right clicking on the default website will open the following window



- Right Click on the properties, select Directory Securities tab to reveal the following



- Click the [Edit] button to edit anonymous access in the authentication control window
- Click browse to select the user, select the user in window that you would like to change

The “Look In” window should default to the new computer name, select the user and click [OK], Manually key in the user password. Leave the check box “Let IIS control the password” blank. Click [OK] to effect the change.

Appendix A: Working With CD-ReWritable (CD-RW) Discs

In addition to working with CD-Recordable (CD-R) discs, the DIRECTOR EC can also rewrite CD-ReWritable (CD-RW) discs. CD-R discs are write-once and can be read on any CD audio player, CD-ROM and MultiRead DVD-ROM drive. CD-RW discs can be rewritten to as many as 1,000 times and are read using MultiRead CD-ROM (usually 24x and faster) and DVD-ROM drives.

CD-RW Supported Formats

The DIRECTOR EC can duplicate CD-RW discs written in most logical formats (ISO 9660, audio, etc.) but not those created using the Universal Disk Format (UDF). CD-RW discs using UDF are produced by packet writing software (such as Roxio DirectCD, CeQuadrat PacketCD, Prassi abCD etc.). Because UDF discs cannot be read by all CD-ROM drives they are not a good choice for distributing data.

CD-RW Recording Speed

CD-RW copying speed is determined by two factors - the CD-RW writing speed of the recorders installed in the DIRECTOR EC and the maximum speed rating of the discs themselves. CD-RW discs are manufactured with an internal speed code, which is checked before copying begins.

Appendix B: Supported Formats For Duplicating

Originally designed for audio use the Compact Disc (CD) evolved quickly and now employs a wide variety of formats for audio, data and multimedia applications. The following is a list of the most popular formats currently supported for duplicating by the DIRECTOR EC. Periodic software updates will be made available to deal with new formats as they appear. To obtain the latest version of software contact your MF Digital reseller or download the update from the MF Digital web site: <http://www.MF Digital.com>

Many CD formats are international or industry standards but variations on them may emerge from time to time. Should you encounter a disc (which does not employ a copy protection scheme) that you cannot duplicate on your DIRECTOR EC, MF Digital will do its best to promptly add support for this format. Dealing with custom formats, however, may be subject to a development charge.

Keeping track of how the various formats relate to each other can be confusing. For example, the DIRECTOR EC can duplicate all CD-ROM Mode 1 discs - this includes ISO 9660, HFS, Hybrid, Rock Ridge and many other types of file systems. The DIRECTOR EC will most likely duplicate CD formats not listed in the table below. If you require further assistance please contact MF Digital's technical support department at (631) 249-93930 or email: support@MF Digital.com

DIRECTOR EC Supported Formats For Duplicating	
ISO 9660	CD-ROM Mode 1 & Mode 2
CD-DA (Compact Disc-Digital Audio)	CD-ROM XA Mode 2 Form 1 & Form 2
Hybrid (ISO 9660/HFS)	Single session
Hybrid (ISO 9660/HFS/Rock Ridge)	Multisession
Mixed Mode	Disc-at-Once and Track-at-Once
CD-I Form 1 & Form 2*	Rock Ridge
Native O/S's (NT, DOS, OS/2, UFS, HFS (Mac O/S), SUN, AS/400, AIX, etc.)	CD-Extra
Video CD	Romeo
Photo CD	Joliet
Picture CD	Bootable CD

** Some variations require a special reader*